# Selecting the Appropriate Procedure for Statistical Analysis.

In this activity you will review the process for selecting the appropriate procedure for statistical analysis based on the flowchart shown.

This flowchart summarizes key procedures described in the Triola textbook, but this is not an exhaustive list. There are many additional statistical procedures not included in this flowchart review.

First, consider the level of measurement of the data.

There are three different categories:

Interval or ratio data, such as heights or weights

Ordinal data, such as data consisting of ranks…

or Nominal data. Data consisting of proportions

or frequency counts for different categories

Now, it is time to test your knowledge.

Next you need to consider the number of populations involved.

For *interval data* the study can involve 1, 2 or more than 2 populations.

For *ordinal data* the study can again involve 1, 2 or more than 2 populations

For *nominal data*, however, you first need to consider whether you are working with frequency counts for categories or proportions.

If you are working with frequency counts, the study will involve a multinomial experiment consisting of one row, or a contingency table consisting of multiple rows and/or columns.

However, if you are working with proportions, then the study can involve two populations or one population.

Next you consider whether there is a claim to be tested or parameter to be estimated.

For interval data, there are several options including the mean and variance of one population, as well as the means, variances, correlation and regression for two populations.

For ordinal data involving two populations, there can be a claim of independence or comparison of matched pairs.

Finally, with particular studies, such as those with Interval data, one population and a claim involving the mean or variance can involve estimating with a Confidence Interval or Hypothesis Testing.

There is also a particular example with studies involving Nominal data, proportions, and one population where these two inferences are involved as well.

Now, it is time to test your knowledge.

Let’s try another one.

In this activity, we reviewed the process for selecting the appropriate procedure for statistical analysis based on the flowchart shown.

Keep in mind that this flowchart summarizes procedures in the Triola textbook, but there are other statistical procedures not included in your book or the flowchart.

Congratulations, you have mastered an important concept of Statistics!

Selecting an inappropriate procedure . . . hate it when that happens.