IA Stats Lesson Important Points:

The language you use to interpret and report your data is critical for writing an accurate scientific paper. Please make note of the following points below when conducting your data analysis.

You can't prove anything through one experiment! Your data will either support your hypothesis, support the null hypothesis, or allow you to reject the null hypothesis.

The results of one experiment can't be considered absolute proof.

Make sure your graphs are properly labeled, include headings, correct error bars, and titles.

Error bars describe the precision of your data and can be used to infer but not confirm statistical significance between trial groups.

If you use a t-test, make sure you are using the correct t-test (paired or unpaired)

Correlation does NOT prove causation.

You can conduct more than one statistical analysis for your data. In fact, you should try to analyze your data as thoroughly as possible.

You never accept a null hypothesis but fail to reject it.

Avoid using vague qualifyers or undescriptive data. Phrases such as, "My data was bad" will earn you a lower score and loss of my respect.

When you finish your data analysis. Take a second to look it over and makes sense. If your data doesn't make line up with what you observed in your experimentation, that might help you identify a possible error you made in your analysis.