Objectives: by the end of this week, students will be able to…

- Define the following: mean, variation, standard deviation, standard error, error bars, margin of error, statistically significant results, null hypothesis, alternative hypothesis, p-value.

- State the difference between standard deviation and standard error and describe the purpose of each test in regards to research.

- State how the amount of data and the variability of that data affect its reliability.

- Compare graphs and determine if the data is statistically significantly different based on whether or not the error bars overlap.

- Calculate the mean, standard deviation, and standard error for a given sample of data (not on quiz).

- Use calculated standard error to determine the margin of error and to create error bars.

- Determine whether or not the null hypothesis can be rejected given the P-value for an experiment.