**T.Test Skillz**

**Goal**: Use a T.Test to determine if two sets of data are statistically different (p<0.05).

**Steps:**

1. Enter your two data sets into Excel.
2. Use your Excel Skillz to calculate the data’s average, standard deviation, and standard error.
3. Use your Excel Skillz to graph the data’s average and apply standard error bars.
4. Use Excel to run a T.Test on the two data sets to obtain a P-value.
   1. The Excel formula is =T.Test(data set 1, data set 2, tails, type)
   2. Click and drag to highlight and choose data set 1.
   3. Click and drag to highlight and choose data set 2.
   4. For tails, choose 2. In biology, we will almost always choose a 2-tailed T.Test.
   5. For type, you have to decide if you want to use type 1 or type 2. Type 1 means the two data sets are from the same individuals. Typically, a “before and after” type of experiment. Type 2 means the two data sets are from different individuals individuals.
   6. Run the T.Test and obtain a P-value.
   7. Interpret the P-value:
      1. P<0.05 means the two data sets are statistically different.
      2. P≥0.05 means the two data sets are NOT statistically different.

**Submission (10 points)**

1. Copy your graphs and T.Test P-values into a word document.
2. Write a couple of sentences interpreting each P-value and what it tells you about the data sets.
3. Submit your word document to TurnItIn.com.