**Photosynthesis Lab Poster Guidelines**

* Descriptive Title
* Purpose Statement (one sentence)
* Background Information needed to understand the investigation done, including *baseline* method overview.
* Methods Experimental Design **Table** of treatments with experimental parameters used per treatment (table taken from Experimental Design Worksheet).
* Results graphs and tables as needed. (See below)
* Conclusion Statement about relationship discovered (one sentence, maybe a long one).

**Results Guidelines**

* Calculate average ET50 and standard deviation for each treatment using the three or four replication values acquired per treatment.
* Run student t tests to determine significant differences to base concluding statement on. Use a website used for the Banana Lab (see below).
* Include significant differences with calculated p values (p must be less than or equal to 0.05 to be significant) in a table with treatment averages and standard deviations. Organize carefully for clarity.
* Graph the average values in a scatter plot. Recall that 1/ ET50 will better show photosynthetic rate increasing with increasing factor magnitude (+ slope). For treatments with unquantifiable parameters (color) a column graph may be better. Also, standard deviation “error bars” (but use plus and minus one standard deviation instead of standard error).
* Here is a YouTube Link to show you how to add error (standard deviation) bars : <http://www.youtube.com/watch?v=GkzrKxR25sM>

**Student t test: two tailed, unequal variances.**

ABOUT: Two sample t test, HOW: <http://ccnmtl.columbia.edu/projects/qmss/the_ttest/twosample_ttest.html>

A GREAT, simple t test calculator (unequal variance, BOTH tails/sides): <http://in-silico.net/tools/statistics/ttest>

\*\*\* MY favorite one: Another calculator (NOT paired, copy and paste data to n=99): <http://www.physics.csbsju.edu/stats/t-test.html>