**\_\_\_\_\_ Quality of Paper (8)**

1. Excellent writing: correct grammar (no dangling modifiers, awkward sentence structure, subject-verb agreement, etc.)
2. Excellent writing: correct spelling
3. Excellent writing: correct punctuation throughout (no run-on sentences, comma splices, sentence fragments, etc.)
4. Flow: paper is written in clear, precise language so that each section is logical, easy to read and fulfills its purpose. Excessive verbiage should be minimized. ***The paper clearly demonstrates that you understand the biological basis for the experiment.***

\_\_\_\_\_ **Introduction (20)**

1. Purpose of the experiment MUST be given
2. Background information adequate – the following must be addressed:

* What is algae and where is it found?
* What role do algae play in aquatic ecosystems?
* What nutrients do algae require for growth?
* What is primary productivity?
* What are limiting nutrients?
* Why do algal blooms occur?
* How can excess algae lead to the collapse of an aquatic ecosystem?
* Is eutrophication a negative process?

***Clearly state your hypotheses and predictions***

\_\_\_\_\_ **Materials and Methods (5)**

1. Should be written in "scientific" style (e.g. ***should be a narrative***, NOT a list of materials\*). In other words, DO NOT write this up like a recipe card.
2. Reader should be able to duplicate experiment with the information given
3. Results should not be given in this section

**\_\_\_\_\_ Results (7)**

1. Data should be properly **summarized** (e.g. give averages, not raw data)
2. Data should be presented in appropriate format (e.g. bar chart vs. line chart)
3. Results should be presented neatly
4. Table/Figure should be numbered and have axes correctly labeled
5. Figures should have a complete key to symbols/colors used in graphs IF necessary and should NOT have a key if UNNECESSARY
6. Table/Figures should have complete caption explaining Table/Figure such that it can be understood without reference to the text
7. Do not interpret WHY the results are the way that they are or include methods in this section

**\_\_\_\_\_ Discussion/Conclusion (25)**

1. **CLAIM –** Restate your hypothesis and whether or not it was supported (do NOT use prove/proven)
2. **EVIDENCE** – Clearly link the pieces of evidence from your results that supports your hypothesis
3. **REASONING –** Explain why this makes sense biologically. What effect did the addition of nitrates have? What effect did the addition of phosphates have? What effect did the addition of both pollutant together have? Which additive(s) had the greatest effect on algal blooms? Did the combination of nitrate and phosphate yield a greater effect than either of the two alone?

**\_\_\_\_\_ Total points (65)**