**AP/HONORS Biology Formal Lab Report Format**

For several of the required AP Biology Labs, you will construct a lab report using the guidelines listed below. You will need to be extremely familiar with these labs for the AP Exam in May.

* Lab reports will be typed and can be submitted electronically (see instructions below).
* Lab reports should be written in APA format (https://owl.english.purdue.edu/owl/).
* This write-up is to be your own work. Once you finish taking data, you are on your own. Except for the data, NOTHING in this report (including graphs) should be identical to your partner’s.
* Any information taken from outside sources must be properly cited. Large amounts of information should not be copied and pasted into your report—even if it is cited.
* Times new roman, 12pt, double spaced, continuous, do not bold anything

**Format:**

* **Title** (should be detailed enough to give an overview of the lab. “Enzyme Lab” is too vague. “The Effect of Temperature, pH and Salinity on Enzyme Activity” is better.

**Abstract** (Center header)- Write 2 key sentences related from each of the sections, this will give the reader a good overview of the paper

* **Introduction**
  + Background Any pertinent background information should be included as an introduction to the lab report.
  + Include variables (independent and dependent); state specifically what you will be measuring.
* Examples:
  + - * Good: “To measure the effect environmental variables such as light intensity, humidity, and wind on the rate of transpiration in plants”.
      * Not so good “To look at the effect various conditions on water loss in plants.”
    - Variables
      * Independent—Include the variable(s) and the conditions.
      * Dependent—State the variable(s) and discuss how it will be measured.
      * Identify the control group and the experimental group.
      * Experimental Controls/Constants—experimental variables that will be held constant; include at least two.
  + Hypothesis will also be included in this section.
    - * Should be written as an “If….then” statement
      * Use clear and precise words
      * Explain what observations led you to come up with your prediction.
* **Procedure**
  + In paragraph form, describe what you did.
  + Provide a thorough *overview,* and *explain* what you are doing.
  + Do not copy the procedure word for word (if you had lab instructions).
  + Should include enough detail that someone would be able to replicate your experiment by reading your report.
* **Data/Observations**
  + Include data tables and any charts and graphs. It is ok to copy/paste data tables I post on my website (for group data).
  + Charts and graphs should be computer generated.
  + All graphs should be based on class data unless otherwise indicated.
* Requirements for a good graph:
  + - * Title
      * Label axes with title and units
      * Calibrate axes in regular increments
      * Plot all points
      * Add a line or curve of best fit— NOT a connect the dots graph
      * Include a legend if more than one set of data is on the same graph.
      * Data section should also include a short paragraph describing observations, or qualitative data.
* **Conclusion**
  + What did you learn by doing this experiment? Explain your findings.
  + Go back to your purpose and answer the question that was posed.
  + Include specific numerical data in the discussion.
  + Include background information on the topic to frame your discussion.
* **Analysis**
  + Answer all analysis questions in the lab handout (or other questions I may specify). For some labs, there may not be any questions.
  + Analyze your data, explaining any possible sources of error, how the investigation could be improved, and any new questions that arise.
* **Work Cited (Centered)**
  + Any outside sources used must be documented in the bibliography in APA format; failure to do so is plagiarism.

Submit electronically