**AP Biology Lab Report Rubric**

**Institution: Wheeler**

**Instructor: Phillips**

**Level: 10th – 12th**

**Formatting Comments:**

All labs are written in APA format. Information about this format is available in the Media Center or available online at <http://owl.english.purdue.edu/owl/resource/560/01/>. (\*Also, on [www.citationmachine.net](http://www.citationmachine.net) )

Don’t forget the header (‘RUNNING HEAD’) in the upper right corner with the title and the page number. Margins should be 1 inch for the text of the report and the font should be 12 pt. Times New Roman. The report should be double spaced. Avoid contractions and colloquial phrases. Write in third person (past tense). Abstract and Works Cited sections must be on a separate pages.

**1. Title Page (5 points)**

This information must be centered on a cover sheet **following APA guidelines**:

 Name of the Experiment:

 Name:

 Partners’ Names:

 Course:

School:

Date Report Completed:

**2. Abstract (10 points)**

 This is a brief summary of your report. In journals it is often limited to 1000 characters. If it exceeds one page, it is probably too long. It includes a brief statement of the experiment’s objectives, a description of the experiment including the hypothesis and the rationale behind it, the methods (not the complete procedure), and the concluding results. Make sure this is on its own page. Although it is first in the report, it is often written last.

**(\**Note- some labs may include an “Introduction” section, which would go here.*).**

**3. Hypothesis and Underlying Theory or Principles/ (\**sometimes this will only be a ‘*Purpose*’*) (10 points)**

 The hypothesis should be stated and should be the focal point of the experiment. The hypothesis should include, or be followed by the underlying principles that support the predicted outcome. If there is more than one experiment or hypothesis, start this section with the underlying theory or principles and then list all of the hypotheses you will test. Cite explanations that are very close to the wording in another reference. Variables should be stated here.

**4. Materials \**Sometimes called Materials and Methods* (5 points):** Briefly list the materials used in the experiment and cite the lab manual for detailed explanations. This should be in a list format with one list per experiment. *\*I don’t mind if these are bulleted*. Reference or sketch is sometimes required.

**5. Procedure (5 points):** Briefly describe how the experiment was performed. I prefer you number the steps, but some teachers and profs do not. Assume the reader is a biologist, so simple procedures do not have to be explained. Hand sketches or cited quotes from the lab manual may be used. \**Note- some teachers or profs may want this section VERY detailed!*

**6. Data/Results (20 points): This includes tables, charts, graphs, calculations, drawings.** Type all data tables (unless the data table was provided as a “hard” copy). Graphs are included here with appropriate titles and labeled axes (with units). Legends (brief description) should be included on tables and graphs.

 Any qualitative (descriptive) data also goes in this section. Paragraph form.

 No conclusions or interpretation of the data should be included here. Sources of error should be included in the Discussion. Note data omissions, if any, with a factual explanation. Organize the tables and graphs in the order presented in the Student Lab Manual or lab handout.

**7. Discussion and Analysis (30 points): \**Note- these are sometimes SEPARATE sections in a report.*** This is a section of great importance that should reflect your ability to analyze your data, (including the identifications of outliers and justifications or the omission of the outliers), and tie the underlying principles to the experimental processes. Summarize the important procedures and results without including all of the detail of their respective sections.

 Explain significant sources of error and how they may have affected the results. Explicitly state if the sources of error will increase or decrease the numerical results. Explain any deviations from expected results. Compare your results to the class average. Explain uncertainties in observations/ measurements.

 Include comments on how the procedures or experimental design could be improved or discuss how additional studies could clarify the results of your experiment.

**8. Conclusion (10 points):** This is a short paragraph that restates information you have presented previously. Begin this section by stating how the results of the experiment did/ did not support the hypothesis that “\_\_\_\_\_\_\_\_\_\_\_\_\_\_”. This should be the “short” version for people who want to read the main point of the experiment.

**9. Works Cited (5 points) - *if applicable*:** Center the words “Works Cited” on a **new page**. Write them in alphabetical order but do not number them. Double space each line and indent the second line of each reference 20 spaces.

 Use APA format to cite references. Use these sites to use to help format citations: <http://citationmachine.net> or <http://owl.english.purdue.edu/owl/resource/560/01/>.

***\*If any “Questions” were assigned, put them here (at the end).***

**10. Formatting/ Grammar/ Spelling (5 points)**

**Some Tips:**

 Quality, not quantity is important.

 Even though you may be working with others when conducting the experiment,

you are expected to think for yourself. Papers that are identical are not acceptable.

 Be honest in reporting your results.

Be neat! Typed lab reports are recommended.

Proper formatting on the title page (see APA guidelines).

If hand written, the paper must be in blue or black ink only; and make sure that all sections in the report are titled and underlined or italicized. Graphs should be done in pencil or colored pencils

Make sure that all drawings, charts, tables, and graphs are properly labeled and have a title.

Avoid personal pronouns: I, You, We, He, She, Me, etc.

Write your report in 3rd person past tense/ passive voice

All work must be in complete sentences, unless otherwise specified.

Include sample calculations when appropriate, which include formulas, equations, etc.

Staple the pages of the lab report together before submitting for evaluation.

Don’t forget ‘RUNNING HEAD’ on your report’s pages.

Any background information must be referenced. Documentation should follow the author-date system. A reference list should be included at the end of the paper. Include your AP Lab Manual, text, or any other sources used to complete the lab. Use standard full format for writing references.

Remember late papers will not receive full credit. Check your syllabus on this fact.