**Formal Lab Investigation Guidelines**

 Formal Lab investigations consist of the following activities:

* **Conducting Investigation Participation:** points will be determined based on the **Lab Investigation Rubric** and or the **Effort and Participation Rubric,** depending on the nature of the investigation.
* **White Boards**: must be recorded in your notebook (preferably your Bellwork/Journal notebook). It is your responsibility to make sure you have recorded your group’s White Board if you are absent. **White Boards will be checked along with bellwork and journals. ( White Boards should be titled with Lab Name and all the required sections)**
* **Round Robin:** will be recorded in your notebook. You will be instructed as to what kinds of information you should look for from each group **(Round Robin Questions)** and how many groups you must visit for each round robin session. If you are absent for Round Robin you are responsible for getting that information from your group. **Round Robins will be graded along with bellwork and journals.**  If you are the Presenter for your group it is your responsibility to indicate that in your notebook. **(Round robins should be titled with the lab name and include all the assigned questions. If you are a presenter, instead of questions you write “Presenter”.)**
* **Peer Review**: will be conducted on the rough drafts of lab reports. If you do not submit a rough draft you are still responsible for participating in the peer review process. Reviewers will **make constructive comments and critiques** and the author will be required to respond on the rubric to these comments. **A Final paper will not be graded without the accompanying Peer Review rubric and Rough Draft** (both copies.) Students will be graded on their feedback and participation in the peer review process, so it is imperative that it be taken seriously. **The Effort and Participation Rubric** will be used for this purpose.
* **Lab Report Rough Draft:** is to be submitted on Peer Review day. Each student should **submit 2 copies of their report** with their **Roster #, Class period and Brown in the upper right hand corner of the paper.** The **specific Title of the lab should be at the top center**. Points will be deducted from papers that are not headed correctly. **Please follow the lab report guide guidelines found on the peer review rubric.**
	+ **If you do not submit a rough draft on peer review day it is your responsibility to get your paper peer reviewed by 3 current Biology students prior to the final report deadline**.
* **Lab Report Final**: is **generally** **due two days after the peer review process**. **Papers should have the *student’s name*, roster #, class period and Brown in the upper right hand corner.** Final drafts should reflect the comments and critiques from the peer review process. **Final drafts should be submitted with your peer review rubric and both copies of your rough drafts**. Final drafts will be **graded using the Instructor column on the peer review rubric**. A final grade will be assigned based on that rubric.
	+ **During first semester only: If you are unhappy with your final grade you will have one week to resubmit for re-grading. This will be your only resubmit opportunity**.
	+ **4 points will be deducted for each day that the final report is late. After 1 week, the report will not be accepted. Excused absences only will be allowed to submit up to two days late with no penalty.**

***If you are absent for the majority of a form lab experience you will be given an alternative assignments that will count for the Lab Participation, White Board, Round Robin, Rough Draft and Final Report. If you are present you must still participate in Peer Review.***

**Lab Report Specifics**

Once you have completed your investigation, you will need to prepare an ***investigation report i.e. Lab Report*** that consists of three sections. Each section should provide an answer for the following questions: ***Be sure to look at the Peer Review Rubric for guidance***

**Section One: Introduction and Goals:**

 What were you trying to do and why?

* ***Describe the goal of the study*** or the task to be completed,
* Provide ***background information*** on the ***theory, law, model or concept*** underlying the investigation
* Make the ***guiding question explicit*** and explain ***how*** the guiding question is ***related to the background information***?

**Section Two: Method of Investigation:**

What did you do during your investigation?

* ***Describe*** ***the type of data*** collected and ***how it helps to answer*** the guiding question.
* ***Describe the Method*** used toconduct the investigation and ***how this helped*** to answer the guiding question.
* ***Describe how the data was analyzed*** and ***how this helped*** to answer the guiding question.

**Section Three: Argument:**

What are your claim, evidence and justification of the evidence?

* ***Provide a Claim*** that ***answers*** the guiding question
* ***Use evidence*** to support the claim

(i.e., measurements or observations that they collected during the investigation, analyzed, and then interpreted)

* ***Present evidence*** in an appropriate manner and ***referenced it in the text***
* Have ***appropriate evidence*** to support the claim?
* Include **a justification of the evidence** that explains: Why the ***evidence supports*** the claim and ***choice of evidence***
* ***Evidence that is consistent*** with class and or scientific community

In addition your report will be assessed for basic writing mechanics such as word choice, fluency, organization and format.

**Format:**

* Your report should answer the questions above in **2 pages or less**.
* This report must be typed use Times New Roman 12 point font and double spaced or 1.5 spaced.
* Diagrams, figures, or tables **should be embedded into the document**, not on a separate page. All figures, diagrams and tables must also be referenced and explained with in the text itself, they do not speak for themselves.
* Each section should have a **subheading** indicating which section it is.
* Labs Reports should have a **title centered at the top of the page.**
* Be sure to write in a persuasive style; you are trying to convince others that your claim is valid!
* On the **Rough Draft DUE date** you should bring **2 printed copies** of your report.
* **Do NOT put your NAME on the Rough Draft of your report! Names go on FINAL REPORTS ONLY!**
* You should have your **Roster #, Your Class Period, Brown,** **and Date on the top right corner on each copy of your rough draft.**
* If you do not have printed copies of your report at the beginning of class ready for peer review you will be responsible for getting your report peer reviewed prior to the final due date.

**Grading Policies**

**Each Formal Lab is worth a total of 110 points. The grade breakdown is as follows:**

**Conducting Investigation Participation 25 points Lab Report Rough Draft 10 points**

**White Board 10 points Peer Review 15 points**

**Round Robin 10 points Lab Report Final 40 points**