Laboratory Evaluation Rubric

In order to receive credit, many colleges require that the student present a completed laboratory notebook. This sheet explains how to set up the notebook and how the notebook will be graded. Since each experiment is different, the points awarded to each will be different, but the general set-up and percentages will be approximately the same. The notebook is to be used for final write-up only and is to be considered the final product. No credit will be given for any experiment that does not have all components completed. It is strongly recommended that the first four sections be completed before doing the lab. Neatness counts.

Title: The title should be reflective of the experiment and should give insight to what the experiment is about. Examples: the first experiment involves finding the acceleration due to gravity. The title might be "finding g" or something similar.

Excellent	**Average**	**Poor**
Thoughtful and Complete Uses Experiment # and Reflects the lab.	Complete Uses experiment number	Uses just a number

Abstract: The purpose of the abstract is to give the reader a clear understanding of the purpose of the experiment or an understanding of what question the student is hoping to answer by completing the experiment. It should include a brief understanding of what the concept being studied is about to show that the student understands what is being studied. It should also includes the statement of the student's hypothesis or educated guess as to the outcome of the experiment and a summary of background information about the experiment. It should be one paragraph in length (four to seven complete sentences).

Excellent	**Average**	**Poor**
Clearly states the purpose of the experiment, the concept being studied and includes a clear statement as to the students idea or educated guess the outcome of experiment with specific values for the unknowns.	States the purpose of the experiment and gives a general as to the outcome of the experiment.	Gives a general idea as to what the lab is about, but does give any information as to the predicted outcome of the as to experiment.

Procedure: The procedure is a set of instructions that outline the process used in the experiment.

Excellent	**Average**	**Poor**
Includes a well organized set of instructions as to how to complete the experiment. No steps are missing in the experiment and another student could complete the experiment without any help from the students set of instructions or procedure	Includes all of the basic instructions for completing the experiment. It could be followed by another student, but may require the student to get some help beyond the instructions.	Is incomplete and would require another student to do extensive work to understand or would require extensive help in understanding how to complete the experiment.

Diagram: In Physics a picture is worth more than a thousand words. The diagram should give a general idea as to the look of the experiment. It should include any variables and vectors.

Excellent	**Average**	**Poor**
A well drawn diagram showing all of the equipment used with labels and appropriate vectors.	A diagram showing the basic equipment used and has some of the labels and vectors.	A sketch that basically shows some of the equipment, but does have labels or vectors.

Materials: A list of all equipment or materials used in the experiment.

Excellent	**Average**	**Poor**
Has a complete list of a necessary materials and equipment.	Has a partial list of necessary materials and equipment.	Has no list or only the bare minimum list of materials.

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Data or Results: The Data section is to include all of the raw data taken during the experiment. It needs to be in a form that is clear and concise. In other words easily understandable for another student or experimenter. Often a chart and/or graphs work best.

Excellent	Average	Poor
The results are complete and laid out in such a fashion that any reader would be able understand them. Units shown.	The results are complete, but would need some work to interpret.	The results are incomplete or not understandable.

Calculations: In this section the student shows all necessary calculations for the experiment. This includes equations used or derived and any graphs.

Excellent	Average	Poor
All equations are clearly stated. All major calculations are shown and the graphs are well drawn and accurate. The student's answers are correct.	Some of the equations are clearly stated and most of the major calculations are shown. If graphs are necessary they are present, but are not as clear or neat as is possible. The student's answers are correct.	Missing most of the equations. Only part of the work is shown. No graphs are drawn. Answers are incorrect.

Conclusion: In this section, the student will clearly state the results of the experiment both in paragraph and numerical form.

Excellent	Average	Poor
The student completes a well written paragraph (3 or 4 sentences) that answers the questions given in the Abstract and gives meaning to the numerical answer. The numerical answer includes the amount of error in reaching it. In most labs a series of questions relating to the lab need to also be completed in this section	The student completes a paragraph stating his/her results and shows the numerical answers in a clear form.	The students has just a numerical answer and no explanation of what it means.

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