

Regents Physics Laboratory Report Requirements

Points	Section	Contents
1pts	<u>Lab Title and Heading</u>	(Top of first page.) <i>Provide all of the following header information:</i> Lab Number and Lab Title (centered) Your Name Lab Partner's Name(s) Date(s) Lab Performed Course Name and Period Teacher's Name Date Lab Turned In
Part 1: Experimental Design:		
2	<u>Purpose</u>	(Single paragraph) <i>Explain what question you are trying to answer, or what you are trying find. Explain why you are doing this lab or why this question is interesting. A hypothesis might be included, but not always. If the purpose is given to you in a handout, you must still include this section.</i>
1	<u>Materials / Equipment</u>	(Bulletized list) <i>Provide a list of all the materials and equipment needed for the lab. The list is usually one or two columns and the items are not numbered.</i>
2	<u>Procedure</u>	(Numbered list of steps) <i>Describe how you plan to achieve the purpose, that is, what are you planning to do? This should be a step-by-step list of short numbered sentences including setting up, key steps of the experiment, what data you plan to collect, and what calculations you plan to perform. Sketches may be helpful to add clarity. <i>Note: If the procedure is given to you in a handout, you must still include the title of this section followed by the statement, "See lab sheet."</i></i>
1	<u>Data Plan</u>	(Blank data table) <i>If you are collecting data, then as part of the experimental design, prepare a blank data table indicating the dependent and independent variables you plan to measure.</i>
Part 2: Data Collection and Analysis		
3	<u>Experimental Data & Observations</u>	(Completed data table and observations) This is the data you collect while performing the experiment. Data may be in the form of quantitative measurements, qualitative observations, or both. This part is usually presented in the form of a <u>completed data table</u>. All data are presented with a title, appropriate units, and must indicate what the data represent. Express measurements with the correct number of significant digits for the precision of the equipment used. All labs must include your original data (recorded in ink). If you choose to rewrite your data neater, or in a different format than originally collected, then you still must attach your original data in an appendix that you reference. (E.g. "See Appendix A for original data.")
4	<u>Analysis</u>	(Graphs and Calculations) <i>This section shows how you bridge from the experimental observations to obtain results intended to answer the driving question of the lab. When graphs are required, they should follow the appropriate format. Graphs have:</i> 1. A meaningful title 2. Axes labeled with physical quantities and units 3. Axes scaled linearly and uniformly starting at (0,0) such that the data fills most of the space allotted for the graph. 4. Data points are accurately drawn with point protectors 5. A line or curve of best-fit is usually drawn. 6. DO NOT CONNECT SUCCESSIVE DATA POINTS.

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		When <u>calculations</u> are required, show them in detail. Show all calculations except for highly repetitive work, which may be shown only once. To show calculations : 1. List the know quantities with appropriate units. 2. Show the formula with each variable written. 3. Substitute the know quantities into the formula with the appropriate units. 4. Show the correct answer labeled with appropriate units. This will probably be the "Result".
Part 3: Conclusions and Error Analysis		
8	<u>Conclusion</u>	(2 to 3 paragraphs and answers to questions when required.) Here is where you connect the results to the purpose, and provide an interpretation of the results. <i>Hint:</i> Look to the purpose for help when you write your conclusion. 1. <i>Briefly</i> restate the purpose of the lab, and the approach you took to fulfill the purpose. 2. <u>Claim:</u> State specifically what you found out or can conclude based on this lab. If you had a hypothesis, did the data support or refute the hypothesis? 3. <u>Evidence:</u> Refer to specific results to back up your conclusion, showing all important <u>numbers</u> where applicable. 4. <u>Reasoning/Discussion:</u> a. Why do the results make sense (or not) to you given your understanding of scientific principles. b. What do you feel you learned in this lab? c. In your opinion, do you feel the experiment was effective and met the purpose of the lab? Explain why or why not, and how it could be improved. In this section, answers in complete sentences all questions that may accompany the lab.
2	<u>Error Analysis</u>	(1 Paragraph) Discuss at least 3 specific and realistic <u>sources of uncertainty</u> in the lab. Occasionally, I may also ask for a percent error calculation as well.
1	<u>Overall Impression</u>	(Quality of report) <u>Correct sequence, format, neatness, and attention to detail.</u> (No ripped edges or messy scribbles.)

This is a total of 25 points, but may be adjusted on some labs. **A 2-POINT PENALTY IS DEDUCTED EVERY DAY A LAB REPORT IS LATE.** When you get a graded lab report back please read it over carefully so that you can see what you did well and where you can improve. Your lab reports will be kept in a folder in class and arranged in order with a Table of Contents listing them. The folders will be kept at the end of the year as required by the New York State Education Department. **Failure to submit the required number of satisfactory lab reports will result in the student being barred from the Regents Examination in Physics and likely failing the course.**

NO PART OF YOUR LAB MAY BE COPIED FROM ANOTHER STUDENT.