LAB REPORT POLICIES — PHYSICS

FORMAT

1. **Cover Page** [5%]: Write the title and number of the lab in the center of the page. Write your name, partners' first names, and class code with section number in the bottom right hand corner of the page. Staple your report once in the upper left hand corner. Do not use report covers or folders.
2. **Abstract** [5%]: Write a brief statement of what you were verifying, measuring, determining, *etc.* in the form of a purpose or goal. One sentence should suffice. Your goal is never to "prove" something, as it is only possible to disprove scientific theories.
3. **Introduction** [10%]: Provide some background to the experiment: concepts, terms, formulas, *etc.* Present them in logical order.
4. **Diagram** [5%]: Make a rough, labeled sketch of the assembled apparatus. Include labeled schematic diagrams when needed (vector or circuit diagrams, for example).
5. **Procedure** [10%]: Write a brief description of the activities you performed during the lab. Gathering or putting away equipment, entering numbers in a table, calculating results, and writing a report are not lab procedures.
6. **Analysis** [40%]: Explain what the data means in words and show how to extract this meaning using mathematics. Items used in analysis can include (but are not limited) to the following:
   - a data table showing the original data collected and the results calculated
   - the equations used in your calculations
   - a graph with a best fit curve and coefficients
   - descriptive text to tie the whole thing together
7. **Conclusion** [10%]: Summarize what you accomplished through your analysis. Respond to the purpose of the lab as stated in the abstract. One sentence is usually enough
8. **Sources of Error** [10%]: Errors are not mistakes. They would arise even if the experimenters were extremely careful. Consider the assumptions made in the theory and the materials and methods used to do the experiment. Identify at least two factors that result in experimental error. Be specific. Avoid generalities.
9. **Raw Data** [5%]: This is to be the actual paper containing the information that was gathered during the lab itself. Transcriptions or photocopies are not allowed. Staple it to the back of your report. Do not rewrite it. Neatness is not crucial. Honesty is.

☞ This format applies to a typical lab report. Subsequent reports may be modified as the situation merits.

GRADING

☞ The total weight of each section is written in square brackets. Lab reports will be carefully graded, with comments on style and substance. Be concise and accurate! Don't waste my time with long-winded ramblings and nonsense. Demonstrate good writing skills.

☞ I will add a bonus of not more than 5% for reports that are computer-produced; that is, printed on paper or printed in a single pdf and attached to an email. No Word documents or floppy disks will be accepted. No grades over 100% will be awarded.

☞ Formal lab reports are due **one week** after the day of the lab activity unless otherwise indicated. Meet this deadline! Reports handed in after class has started will be penalized 10%. (Acrobat pdf files must arrive in my mailbox by midnight.) Reports submitted after the on-time reports have been returned will not be graded and will receive a grade of zero.

REGENTS REQUIREMENTS

☞ Pursuant to Section 207 of the Education Law and Section 8.2(c) of the Rules of the Board of Regents, all students taking the Regents exam in physics must spend a minimum of seven, double period classes per semester engaged in hands-on laboratory activities and submit satisfactory reports of their laboratory experiences.

☞ Make up labs are available to students with an absence note from a parent. Make up labs are currently scheduled for period 10 on the Wednesday of the week after a lab. Have the supervising teacher stamp or sign your raw data sheet before leaving. Students who cut lab will not be allowed to attend make up lab and will receive a grade of zero.

☞ In addition, you must **retain all completed and graded lab reports** and then submit them for archiving at the end of each semester as proof of eligibility. If less than 7 lab reports per semester are present in your collection you will be barred from the exam.

☞ These requirements do not apply to students in AP Physics C.

Top Ten Stylistic Errors I Never Want to See in a Lab Report Again

1. Wishy-washy phrases
    - "might have"
    - "may have"
    - "could have"
    - "should have"
    - "possibly"
    - "sort of"
2. Nonspecific excuses
    - "old equipment"
    - "outdated equipment"
    - "bad equipment"
    - "dirty equipment"
    - "not enough time"
    - "inadequate time"
    - "human error"
3. Space filling sentences
    - "Before beginning this lab we must define terms."
    - "There were many sources of error in this lab."
4. Any sentence using the word "data"
    - "We wrote down the data."
    - "We used the graph to get the data."
    - "This is a graph of our data."
    - "Then we analyzed our data."
5. Pretty much any phrase containing the words "wrong" or "right" (except when referring to a "right angle")
    - "We measured wrong."
    - "We did not use the ruler the right way."
    - "We wrote down the wrong numbers."
    - "We did not calculate the right answers."
    - "The measurements caused us to calculate the wrong answer."
6. Spelling errors that won't be caught by a spell checker
    - "fro" when you mean "for"
    - "till" when you mean "until"
    - "angel" when you mean "angle"
    - "trails" when you mean "trials"
    - "censor" when you mean "sensor"
    - "photo gate" when you mean "photogate"
    - "than" when you mean "then" (or vice versa)
    - "weight" when you mean "weigh" (or vice versa)
    - "of" when you mean "have" (or vice versa)
7. Words that confuse science with mathematics
    - "prove"
    - "proves"
    - "proven"
    - "proved"
    - "proof "
    - "proofed"
8. Words that assume science is the pursuit of perfection
    - "exactly", "exact", or "inexact"
    - "perfectly", "perfect", or "imperfect"
    - "precisely", "precise" or "imprecise"
    - "possibly", "possible" or "impossible"
    - "accurately", "accurate" or "inaccurate"
9. Comparative statements that don't make a comparison
    - "The force of friction was greater." (Greater than what?)
    - "The mass was more." (More than what?)
10. Netspeak
    - "u"
    - "r"
    - "lol"
    - ":-("