

Physics Laboratory

We will meet in the Physics Laboratory, E015, for two periods, and perform experiments that demonstrate some of the principles discussed in class. This is a hands-on activity in which everyone participates.

Physics Lab Report

A written summary of your work in the laboratory is due the next time our class meets. Your grade will be based on:

- quality of content of your written work
- accuracy of results
- completeness of your work
- correct grammar usage
- effort of participation in lab

Format of report

A. Title of experiment.

B. Introduction - Describe the purpose of the experiment, that is, what problem are you attempting to solve. Supply background information about the ideas and physical principles involved in the experiment. This is where you demonstrate your comprehension of the subject matter.

C. Materials and Methods - State what equipment was used and the procedure that you followed. Include a diagram of the setup.

D. Data - This includes any information you gathered. Data is presented in neat, well-labeled, and organized tables.

E. Results - Describe what have you found. Data is usually used to calculate something else. Provide a sample calculation showing all formulas used. Summarize your numerical results in the form of a data table. Any graphs must be plotted on graph paper, with clearly labeled, and scaled axes.

F. Discussion – Explain the meaning of your results, and describe to what degree the purpose of the experiment has been accomplished. How accurate are your results? When possible, do a percentage error calculation.

$$\% \text{ error} = \frac{[\text{Accepted value} - \text{Experimental value}]}{\text{Accepted value}} \times 100 \%$$

Other than human error, discuss legitimate sources of error that can account for poor results. Suggest ways in which the experiment can be improved. Answer any additional questions you have been given.

G. Literature Cited – List any book or article that may have been cited. For internet sources use:

Author, A. A., & Author, B. B. (Date of publication). Title of article. *Title of Online Periodical*, volume number(issue number if available). Retrieved month, day, year, from <http://www.someaddress.com/full/url/>