

## Instructions for Experiments

1. Read each experiment thoroughly before coming to lab. Quizzes are likely.
2. Come prepared to ask questions.
3. Review the pertinent material in the Physics Lab Help-Ware software on the Apple computers before lab. Also review pertinent material in your textbook.
4. Work in groups of 2 or 3 whenever possible.
5. Discuss the procedures and analysis carefully with your group.
6. Think before doing. Consider ways you can reduce errors and uncertainties. If your percent difference comes out large go back and re-examine your measurements and calculations.
7. Try to get as much of the analysis done during the lab period as you can.
8. Take precautions for safety. Also handle equipment carefully to prevent breakage.

## Instructions for Lab Write-ups

1. Don't forget to report units with your measurements.
2. Indicate the quantity and units on each axis of your graphs. Spread graphs out to cover as much of the page as is reasonable.
3. Show all calculations, including calculations of slopes of lines and calculations of percent differences.
4. Report uncertainties and percent errors honestly and carefully. Don't report 0% difference. Percent difference is meant to indicate the accuracy of your measurements and there is *always* some error or uncertainty, so don't record 0% as your difference; instead, if it first seems to be 0%, use some other method to estimate the error (by, for example, using the number of significant digits to give an estimate of the error).
5. Make your drawings and explanations so clear that a layman could understand them (and so you can still understand them in three years). Sketches should show the important aspects of the operation of the apparatus.
6. Write a conclusion section for each lab summarizing what you learned and containing your evaluation of the experiment. In your conclusions indicate which special steps you took in the procedure to minimize errors.
7. Please staple multipage write-ups.
8. Neatness counts.