

The intention of writing mini-papers is to provide an opportunity for students to become familiar with writing about quantitative information and to learn about the nature of scientific writing. The mini-paper should be written to convey information learned from the experiment to a reader who is not familiar with what you have done. While the topics covered in the paper will vary the structure of all the papers will be the same.

- **Title:** This should be brief, but give an idea about the nature of the investigation.
- **Introduction:** The introduction should contain a statement of purpose or a research question. You should motivate the experiment, explaining why this is an interesting topic to investigate. When suitable you should present a hypothesis about what your expectations were for the outcome of the experiment with an explanation for why this hypothesis should be valid
- **Body:** The main body should contain a brief synopsis of how the experiment was conducted (without small details unless they are crucial to understanding the outcome). Processed data should be presented – usually in the form of a graph, and general comments about trends that show up in the data should be mentioned. The data should be quantitatively analyzed – eg. Find mean, standard deviation, slopes and intercepts etc as appropriate. These results should be interpreted physically. Give plausible explanations for why the results have turned out as they have.
- **Conclusion:** Make concluding remarks that address the purpose or research question. Do the results agree with your hypothesis? Indicate the limitations of your results – ie how conclusive can you be about your observations? Suggest possible extensions or improvements.

The paper can often be as short as a page. Try to include figures in the main body of the paper rather than leaving them at the end.