

the abstract is the first section of your report, you may want to write it last because it *is* a summary.

Introduction

The introduction section is meant to provide the reader with the answers to two very important questions: what is the experiment about, and why is it worth doing? In a published journal article, this section often begins with a brief summary of previous related research, a statement of a problem that this research has raised, and a brief description of the experiment in question and how it addresses that problem. Detailed descriptions are not appropriate in this section; the point is to provide a concise picture of your purpose and a broad survey of your approach. This section should capture the interest of your readers, provide them with a general orientation, and convince them that what you are doing is interesting and worth reading about.

After you motivate the experiment, you should give a brief summary of the experimental method you used. This need not be extensive; the detailed description goes in the procedure section, which is separated from the introduction only by the theory section. You need to give enough information so that a reader who is primarily interested in your method, perhaps to duplicate your experiment or apply it to a related problem, can see if that method is appropriate.

Conclusion

This section should, in one or two paragraphs, review the purpose of the experiment and summarize the implications of your results. That is, you should remind the reader of the basic question or problem that the experiment was designed to address, as presented in the introduction, and briefly explain how your results bear on that question or problem. This section should be a summary of information presented elsewhere rather than a place to present new information. The purpose of this section is to close the report with a review highlighting the most important results. As with the abstract, you should report quantitative results and their experimental uncertainties.

Students often ask, “what is the difference between the conclusion and the abstract?” The answer is, “not much.” Both are summaries of the rest of the report, and both contain quantitative results. The main differences have to do with location: The abstract is the “hook” at the beginning; it should contain hints of the wonders to come and summarize the *entire* report. The conclusion comes at the end, and should give some sense of finality or closure. It will emphasize the deductions from your data analysis, describing them in more detail than is given in the abstract. Both the abstract and the conclusion should report comparisons between the