

Persuasion and Lab Reports

A lab report is a carefully crafted argument to persuade an audience. It involves conducting research using the scientific method and lab skills. It also serves as primary evidence for credibility. May be read nonlinearly by the audience.

Understanding the Process of Writing Lab Reports

Organize your recorded work in the form of a lab notebook for peer review and reference. The writing process may be nonsequential. It's often easier to write the introduction after having written the method, results, and discussion. Only then will you have a clear idea of how you wish to introduce your argument.

Understanding the Structure of the Lab Report

Basic (flexible) structure:

1. **Title:** a precise hook to gauge target audience's interest. Good titles use index and abstracts to save researcher's time.
2. **Abstract:** summary of entire report. Mirrors the entire lab report structure. Good indexing will help researchers locate desired information efficiently or just stay up to date. *Informative abstracts* showcase major findings whereas *descriptive abstracts* simply state topics covered.
3. **Introduction:** establishment of importance and review of previous research (*secondary sources*). Hypothesis is described and linked to method. Use *equation editors* when dealing with mathematics.
4. **Materials and methods:** convince readers of your approach. That the research was conducted carefully and is *replicable* through specification of materials and procedure.
5. **Results:** raw data evidence from procedure proving/disproving hypothesis. *Present data honestly!*
6. **Discussion:** interrupting the results for/against the hypothesis. Organize via major trends/importance.
7. **Conclusion:** summarize the main points covered by your report. Summarize the implication of your findings.
8. **References:** list all cited references.
9. **Acknowledgments:** thank the colleagues that assisted you. List financial funding.
10. **Appendixes:** information such as tables of measurements, specialized data, logs, analyses or calculations.

Understanding the Role of Science and Engineering Articles.

After college, you'll be presenting lab work to a professional audience of supervisors, boards, government officials, clients, and other scientists/engineers. Lab work can be developed into articles for publication in professional journals subject to peer review. Some companies offer bonuses for these scientific contributions to garner recognition as leaders in innovation.