

Writing Lab Reports in the Sciences

Abstract

An abstract is a one-paragraph summary of the entire lab report. Thus, it is usually written last. The abstract must contain information about the purpose, methods, results, and the conclusions of the results. The length of an abstract is usually 250 words. Being concise and informative is essential in the abstract.

Introduction

The introduction presents the information that readers will need to understand the purpose and focus of the paper. Information such as past research, and the hypothesis are included within the introduction. Past research is usually presented first with the hypothesis coming last in the introductory paragraph. An active voice is preferred over a passive voice.

Methods and Materials

Many times after a professional journal is published other scientists will repeat the procedure to determine the validity of the results. Therefore, this section needs to be detailed and understandable. Use past tense to describe in chronological order what was done in the experiment, with specific materials included. Variables that are not relevant to the procedure need not be included. For example, including the type of weather outside during an experiment in the lab would not be relevant to the procedure.

Results

This section includes the results that are relevant to the hypothesis. The results may not be what was expected but should still be included. Data may be represented in a table format or by use of a graph. This is the results section, and as such any discussion or interpretation of the data should only be included in the discussion section. Be aware of this distinction between the results and discussion sections and compile the data/interpretations accordingly.

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Discussion

In the discussion section the results of the experiment are explained. This must include how the data correlates to the hypothesis. Interpret major results and connect them to the hypothesis. Do not recompile all of the data contained in the tables and graphs again. Instead refer back to the figures pointing out relevant points of data or statistics to interpret for the reader. Can the proposed hypothesis be accepted or rejected? Why? Connect your research to the research previously stated in the introduction and discuss how your findings agree or disagree. Also be mindful of the words you use, such as significant. You can only say something is significant if there is statistical data to back it up.

Acknowledgements

There may be reason to include an acknowledgements section in your report. In professional journals the author usually lists people who helped them in the researching or writing process.

Literature Cited

Scientific reports use the CSE citation style for listing articles, journals, and books used during research and writing.