

6. DISCUSSION ►The discussion is in many ways the most important section of your paper. The discussion should present an interpretation of your results, as well as a comparison with those of others. Just presenting a list of results is not enough for a scientific publication. You need to be able to interpret your data, and draw conclusions. ►Ensure that all your arguments and assumptions are scientifically formulated, clearly stated, and well supported, either by your own results or by citing other people's work. All your statements must be accurate (true or falsifiable) and logical. ►A good paper can be read and evaluated on its own. Ensure that you have provided all the necessary information for your reader to make an independent judgment. ►Refer to the original objective (main question, hypothesis) of your research. Explain whether or not you have succeeded in reaching your objective. ►Make sure to explain why your results are of importance in a wider context. ►Some journals require you to formulate your conclusion in a separate section. If not, you should end the discussion with a concluding paragraph. If your data do not allow you to draw any firm conclusions, you can make generalized inferences. You may also end your paper with a section that discusses the relevance of your study system or with a general statement about the implications for future research.

7. REFERENCES ►It is important to stay updated with the latest literature. Always cite the most recent papers that are relevant to your work. It looks very unprofessional if you refer to a book from 1975 but neglect to cite a paper from 2002 providing new data and insights that are pertinent to your topic.

► Make sure that you cite your sources properly. Journals always provide guidelines on how to cite references, including scientific papers, book chapters, and even Internet sites. It is important that you strictly follow the format used by the journal to which you intend to submit your work. ► When citing a work by three or more authors, refer to them as “et al.” in your paper. For instance: (Cohen, Bills, Cocquyt, and Caljon 1993) should be cited as: (Cohen et al., 1993).

In the references section, you should list every author. **Writing student**

projects Unlike an essay, a report has a formalized structure. Taking into account disciplinary differences, scientific or laboratory reports written by undergraduates share the same format as scientific reports written by academics for publication. The sections of a scientific report are: Elements of a Student's Research Paper · Title · Abstract · Introduction · Methods · Results · Discussion · Works Cited · Appendices While all scientific research reports share a common organizational setup, you will find variations within reports. The common structure of the report is to ensure ease of reading. 15 | Page

Researchers usually want to quickly filter the huge amount of information available in scientific publications; the student's projects are no exception. A common organizational structure helps readers move quickly through reports. In fact, often scientists do not read entire reports and rarely read them in chronological order. For example, they may skip directly to the findings and not read the methods. The discrete sections of a report also force the researcher to carefully distinguish the various aspects of the experiment. For example, what is a result and what is your interpretation of that finding?

Title Title must be informative and specific, concise and understandable.

Abstract The abstract is a one paragraph (<100 words) summary of the report, including the question investigated, the methods used, the principal results and conclusions.

- 👉 Abstract offers a complete but selective summary of most significant ideas and information
- 👉 Abstract uses clear, precise wording (increase precision through successive revisions)
- 👉 Abstract accurately reflects the paper's organization, emphasis, and content on a very small scale

Why do we write abstracts? Abstracts are a quick way for readers to understand your research project. Thus, readers can assess the relevance of your work to their own simply by reading your abstract.

Your intended audience should be able to understand the abstract without having to read any of the report. Because the abstract is usually the first thing that readers read, and based on that abstract, make a judgment whether to keep reading or not, the abstract is one of the most important elements of a scientific report.

Introduction The introduction is a brief section (no more than 1 page usually) designed to inform the reader of the relevance of your research and includes a short history or relevant background that leads to a statement of the problem that is being addressed. Introductions usually follow a funnel style, starting broadly and then narrowing. They funnel from something known, to something unknown, to the question the paper is asking.

Methods The Methods section chronologically describes the process you undertook to complete the research. The method is written as a process description, not as a lab manual procedure. Be precise, complete, and concise: include only relevant information—no unnecessary details, anecdotes, excuses, or confessions.

- ↳ Methods must give details of experimental procedures
- ↳ Methods must describe techniques for tracking functional variables (timing, temperature, humidity, etc.) and rationale for tracking those variables
- explains analytical techniques used

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Results What are results? "Just the facts." The Results section DESCRIBES but DOES NOT INTERPRET the major findings of your experiment.

Present the data using graphs and tables to reveal any trends that you found. Describe these trends to the reader. The presentation of data may be either chronological, to correspond with the Methods, or in the order of most to least importance. If you make good use of your tables and graphs, the results can be presented briefly in several paragraphs.

Discussion What's the Discussion? Interpretation. This section offers your interpretations and conclusions about your findings. How do your results relate to the goals of the study, as stated in your introduction, and how do they relate to the results that might have been expected from background information obtained in lectures, textbooks, or outside reading? This is your chance to demonstrate your ability to synthesize, analyze, evaluate, interpret, and reason effectively. You do NOT need to bring in theories to explain your ideas beyond what you have learned in class. Your readers are looking for well-supported opinions, not for leaps of fancy or mere repetitions of your findings, so you will need to think carefully about your findings in order to draw conclusions that are neither too narrow nor too broad. 18 | Page

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