

**Research Paper Guide**  
**Geology Courses**  
**Humboldt State University**  
**Jason R. Patton**

In this document I give an overview of what is expected to be included in the scientific research paper.

For the paper, I would like us to review scientific research conducted that explores some geologic phenomena/phenomenon. The subjects are stated in the syllabus.

The information should come from your own observations, scientific articles on the subject, and/or library and internet research. References can be single spaced. References do not count towards the page count.

Your work must include:

- 1) References that need to be from the original source such as the article, interview, or book.
- 2) either 3-5 or 5-10 pages of text (depending upon the assignment), double spaced.
- 3) A number (depending upon the assignment) of figures, tables, or plots with captions describing what the figure/drawing/plot is showing.
- 4) A minimum of three references from original sources, not including your textbook. References do not count towards the page count. (The textbook is a great source of ideas for your paper.)

Scientific Papers typically contain these main sections:

- **Abstract** (summary of the paper; here is an abstract writing guide: [http://cascadiageo.org/scholarships/forms/CG\\_abstract\\_guidelines.pdf](http://cascadiageo.org/scholarships/forms/CG_abstract_guidelines.pdf)). The abstract is the most important part of scientific papers because many people read the abstract to find out if they want to read the entire paper.
- **Introduction** (Introduce topic, provide background information, mention the goal of this paper, state the hypothesis/hypotheses to be tested)
- **Data and Methods** (list the data types and what methods are used to collect the data; also list the analytical methods used)
- **Results** (list the results of the data collection and analyses)

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- **Discussion** (This is where one discusses how the results support or refute the hypothesis/hypotheses mentioned in the introduction.)
- **Conclusion** (This is a summary of the paper; remember to again state if the hypothesis/hypotheses were disproved or not.)
- **References** (list your references here; the minimum for this paper is three references)

There are many variances of this structure. Please choose one structure and stick with it (mine or one from one of the websites provided here). Please look at the various scientific paper writing guides to help. Here are a few of them I found in less than a minute of searching on the internet.

<http://csmres.jmu.edu/geollab/fichter/studresrch/format.html>

<http://www.studygs.net/labreports.htm>

<http://www.experiment-resources.com/research-paper-outline.html>

The librarian can help you with formatting your references. Choose a typical scientific format for your references and use this for all your references (e.g. the MLA format taught in English classes). The writing lab is another resource available to you, as mentioned on the first day of class. The writing lab is also a good place to learn how to create well written paragraphs and well written sentences. After you have written your paper, go over it and make sure that you have topic sentences for each paragraph.

This assignment may be challenging and it may be the first time you have written a scientific paper. I am sure you will succeed. Most of all, I want you to do your best and to have fun.