

Instructions for the Term Papers

Selection of a topic: You can select any topic that is relevant to the course content. You should select a topic that you are passionate about. However, I will appreciate it if you let me know your topic before you start working on the term paper. My suggestion is to select a topic that has local interest (but I will accept other topics as well). **You can also set up an inquiry-based experiment and present the results in the form of a research paper.**

Length of the paper: The length is not as important to me as its content is. The term paper should be an in-depth analysis of a topic that is relevant to our class. Think of your paper to be something that you would consider submitting to a professional conference for presentation or publishing in a journal (which should give you an idea about its length and quality of writing!). The paper should not exceed 10 typed pages including illustrations, tables, graphs, and maps.

Format of the paper: You should follow a format used in a major geologic professional journal, such as *Geology*, *GSA Bulletin*, *Environmental Geology*, or the likes. Please consult a journal for the format. Your paper **should contain the following sections** (items): Abstract, Introduction/Background, Results/discussion, Conclusions, and Bibliography (make sure to refer to the appropriate reference in the text of your paper). Here is an outline of various sections that you should include in your paper:

Abstract: Shouldn't be more than a couple of paragraphs. You will summarize what you have studied, why you have studied this topic (i.e. the importance), what are your major findings, and major conclusions. It is better to write the abstract after you have finished writing the paper (but the abstract should be the first section in your paper).

Introduction/Background: Here you will introduce your topic (i.e. what you are studying, why you are studying this topic, what is already known about this topic, what is not known about the topic, etc.). First, you will summarize what is already known about the topic, and then you guide your readers to the purpose and scope of your study (i.e. what is the knowledge gap).

Alternatively, you can also develop a hypothesis about a natural phenomenon or an observation; set up an experiment; collect data; analyze the results; and test the validity of your hypothesis; either accept or reject the hypothesis based on your results; and make a few conclusions. This section shouldn't be more than one page long.

Results/Discussion: Here you present your findings based on either literature search or field data. You explain your observations (i.e. summarize all sides of arguments about your topic) and offer your interpretations (or educated opinion). This section should be about two-page long and should contain all diagrams and charts (if any).

Conclusions: Here you summarize what you have learnt or what your major conclusions are about the subject matter. This section shouldn't be more than a paragraph or so long.

Bibliography: This is a very important section of your paper. Here you not only catalogue the resources which you based your study on, but also give your readers an opportunity go read the original sources so that they can make up their own mind about

the topic in question. The list of journal articles, books, URL, etc. should be in alphabetical order by last name of the author(s) or the book title followed by the year of publication and the name of publisher. **Make sure to cross-refer the bibliography by last name of author(s) and the year in the body of the text of your paper.** Published journal articles and books should be your primary sources for bibliography. You can use some Internet sources in the bibliography along with published sources, but the Internet sources have to be authentic (i.e. governmental organizations or known academic institutions). Consult a professional journal in geology.

Due date and oral presentation: The paper will be due during the last of classes (not the finals week). You will have to present the paper in the lab on **Nov. 19 or Dec. 3**. I will not accept a late paper. If can get the paper to me at least two weeks before the last due date, then I will make suggestions for improvements and you will be able to make corrections on the final paper based on my suggestions. I will assign a grade on the final draft of your paper.

Questions?: If you are not sure about any aspect of the term paper, you should ask me questions.