Scientific Writing

Introduction

Scientific research is a group activity in which a team or teams of scientists work and experiment while investigating a central question. This research typically takes long periods of time, in which scientists gather, record, and analyze their data until they are ready to draw conclusions. But what next?

After performing research, scientists must publish their results for other scientists to read. No data or conclusion is useful if it is not first made available to the overall scientific community. Researchers write a paper detailing their experiment, its results, and conclusions and submit it to various scientific journals. The journals will review and select submissions based on their own unique criteria. Thus, the paper is a format in which scientists can present their research in an attempt to persuade others in their field to accept their data or experimental methods.

Because the purpose of a scientific paper is unique from that of a persuasive essay in your English class, the writing style and content must be varied appropriately. The text of a scientific paper must convey information simply and clearly. Unlike other papers you have read or written, scientific papers do not try to convince the reader with creative use of language. Instead, these papers present the results of an experiment and discuss the results in a succinct and clear manner.

Format

Scientific papers have a very distinct set of sections centered around a particular purpose. The most common sections are as follows:

1. Title
2. Abstract
3. Introduction
4. Methods
5. Results
6. Discussion
7. Literature Cited

We will review each of these sections in depth before you have the opportunity to write a scientific paper based on an experiment conducted in class.

Reading Scientific Papers

The following activity is meant to help familiarize you with the sections of a scientific paper or report. Read the report that is provided and summarize the primary purpose of each section. **What is important for this section? What type of information is included or not included? What is the reader meant to learn from this section?** Do not summarize the content, only the structure!

Title:

Abstract:

Introduction:

Methods:

Results:

Discussion:

Literature Cited:

Now, read the second paper and summarize the content of each section. What does the author say in each section? How do they convey the information? What is the paper about?

Title:

Abstract:

Introduction:

Methods:

Results:

Discussion: