

# Lab Reports

{General

# Outline of Lab Report

- Title Page
- Abstract
- Introduction
- Claim
- Materials
- Procedures
- Evidence
- Reasoning
- References

# Title Page

- The title of the experiment.
- Your name and the names of any lab partners.
- Your instructor's name (Sorensen)
- The date the lab started and ended.
- The date the report will be submitted (May 1).

# Title Page-Title

- The title says what you did. It should be brief (aim for ten words or less) and describe the main point of the experiment or investigation. An example of a title would be:
  - "Effects of Ultraviolet Light on Borax Crystal Growth Rate".
  - If you can, begin your title using a keyword rather than an article like 'The' or 'A'.

# Abstract

- The purpose of an abstract is to allow the reader to judge whether it would serve his or her purposes to read the entire report. A good abstract is a concise (100 to 200 words) summary of the purpose of the report, the data presented, and the author's major conclusions.
- Double spaced

# Abstract

- **Must have:**
  - Purpose
  - Key result(s)
  - Most significant point of discussion
  - Major conclusion
- **May Include:**
  - Brief method
  - Brief theory
- **Restrictions:**

# Introduction

- Usually the Introduction is one paragraph that explains the objectives or purpose of the lab. In one sentence, state the hypothesis. Sometimes an introduction may contain background information, briefly summarize how the experiment was performed, state the findings of the experiment, and list the conclusions of the investigation. Even if you don't write a whole introduction, you need to state the purpose of the experiment, or why you did it. This would be where you state your hypothesis.

# Introduction

- *Why was this study performed?*
  - Answers to this question may be derived from observations of nature or from the literature.
- *What knowledge already exists about this subject?*
  - The answer to this question must review the literature, showing the historical development of an idea and including the confirmations, conflicts, and gaps in existing knowledge.
- *What is the specific purpose of the study?*
  - The specific hypotheses and experimental design pertinent to investigating the topic should be described.



# Claim

Conclusion about a problem. Answers who, what, where, when and why (when possible)

- Concise statement (1-2 sentences)
- Relates directly to the question and hypothesis
- Focuses on only the most important features of the experiment or investigation

# Materials

- List everything needed for the lab

# Procedures

- Describe the steps you completed during your investigation. This is your procedure. Be sufficiently detailed that anyone could read this section and duplicate your experiment. Write it as if you were giving direction for someone else to do the lab. It may be helpful to provide a Figure to diagram your experimental setup.

# Evidence

- Numerical data obtained from your procedure usually is presented as a table. Data encompasses what you recorded when you conducted the experiment. It's just the facts, not any interpretation of what they mean.

# Reasoning

Reasoning: a justification that shows why the data counts as evidence to support the claim and includes appropriate scientific principles

- 2-4 paragraphs
- Illustrates understanding of how experiment fits into the “big picture”
- Incorporates background knowledge, and makes connections to science concepts studied in class, to draw conclusions about experiment
- Take specific evidence and justify how that evidence connects to the claim

# Big Picture

- Can a man made terrarium become a self sustaining ecosystem with three functioning and interacting systems? Then can this system be reproduced on a large scale to make all land sustainable on earth?

# Academic Writing

- spell out numbers between 0-9.
- Capitalize titles
- Cite sources
- Capitalize first word of a sentence
- Capitalize names
- No contractions: ex: can't = cannot, didn't = did not, it's = it is, etc.