

Name: _____

Date: _____

Rainbow Throwdown: Final Lab Report

Written scientific reports provide students the opportunity to review and summarize their findings and to share the ideas they have learned with the teacher and others. Being part of a scientific community means completing experiments to find answers to questions and then presenting data and conclusions to persuade others to accept or reject a hypothesis. The lab report is similar to a published paper that is reviewed by peers and if accepted, becomes part of the larger body of scientific knowledge. Much of this work has already been done. Refer to your notes from the Rainbow Throwdown handout to create a full lab report of your findings.

Students should include following in their report:

1. Title
2. Abstract
3. Introduction
4. Materials and Methods
5. Results
6. Discussion & Conclusions
7. Literature cited

Title: The title illustrates the experiment in a straightforward manner, using keywords by which the topic can be easily identified.

Abstract: The abstract is a short summary of the report and usually contains 100 to 200 words. The abstract concisely describes the purpose of the report, the data collected, and your major conclusions.

Introduction: Provide brief background information for readers to be able to understand the subject. Use your notes from class, information from your peers' blog postings, or additional information from textbooks or other literature to describe some basic ideas about soil erosion. The introduction should also outline the purpose or objectives for the research and give the reader a context to understand your report. The introduction might answer a number of questions like, "Why is this research important?" or "What information do we already know about this subject?" The introduction should also include your hypothesis.

Materials and Methods: Using your handouts and notes that you took during the experiment, describe what items were used and the method or steps you took to carry out the experiment. Provide enough detail so that someone else could repeat your experiment.

Results: The results section summarizes the data from the experiments without discussing their implications. Organize your lab data into a visual form by creating tables, figures, graphs, and photographs. All figures and tables should include descriptive titles. For example: Figure 1 shows that the turbidity levels were higher on bare soil compared to soil covered by hay. Focus on general trends and relationships among the data.

Discussion and Conclusions: Begin the discussion by stating whether or not the results from the experiment supported your hypothesis. Use data from your notes to show support of your hypothesis or provide evidence that your hypothesis was rejected. Summarize what you have learned about erosion and sediment control from doing the lab. You might include ideas for future experiments or questions to be researched.