

Lab Report Format – APES Ecological Study

The Ecological Study involves the research and development of a scientific experiment pertaining to the Green Hope wetland. You will not actually carry out the experiment, only writing the introduction, materials and methods, and works cited. Your experiment must have a specific purpose: “To determine the effect of _____ on _____”. Topics must first be approved, and there may be no repeat topics among any students. The report must also have a proper hypothesis: “If...then...” and the report must include a clearly identified dependent variable, independent variable, and controlled variables. All the intricacies of a report such as this cannot be contained on just this one page. Further instructions and clarifications will be given in class verbally and on the front board.

Introduction

One very important part of the introduction section is outlining the purpose of the experiment as concisely as possible. Stating the question that is to be answered by the experiment can easily be introduced with the phrase "In this experiment" or "In this study" and then explaining from there. These statements should be as specific as possible to demonstrate a clear understanding of the experiment. The purpose of these statements is to explain what the experiment does and how the results will be interpreted. Once the question that the experiment attempts to answer has been stated, background information needs to be given to show why the question was asked. Background information should include, but is not limited to, the importance of each variables and the habitat along with the importance of the specific study performed. Clearly state the scientific name of any organisms involved. Clearly identify the dependent and independent variables along with the controls. You should end with a clear hypothesis in the form of an “if/then” statement.

Materials and Methods

The Materials and Methods section is a vital component of any formal lab report. This section of the report gives a detailed account of the procedure to follow for a controlled, reproducible experiment. Such an account is very important, not only so that the reader has a clear understanding of the experiment, but a well-written Materials and Methods section also serves as a set of instructions for anyone desiring to replicate the study in the future. The materials list should be bulleted include a very specific list of everything needed for a controlled, reproducible experiment. The methodology should be very specific, yet concise. Considering the importance of "reproducible results" in science, it is quite obvious why this is so vital.

Works Cited

The last part of a report can often be tedious, but it need not be difficult. The literature-cited portion of your paper is very important because it enables either you or another reader to go back and obtain the sources that you used in preparing your report. It also allows the reader to obtain additional information if he or she wants to find out about a certain topic you addressed. Another important reason for having a literature cited page is that it allows anyone who is unsure of your data to go back and verify that you reported everything correctly, thus eliminating any uncertainty. Be sure to cite all sources in APA format and include parenthetical citations where appropriate. Wikipedia is NOT an acceptable source due to its unreliability.

The Condensed Version...

Introduction (50 pts) – 1.5 pages background information on the dependent variable and 1.5 pages background on the independent variable - 0.5 pages background on the importance of wetlands - clearly stated purpose, variables and hypothesis. The entire introduction should be three to five pages.

Methods and Materials (40 pts) - a bulleted list of specific materials accompanied by a specific sequence of numbered methods that someone unfamiliar with the study could easily follow to replicate the experiment. The length of this section varies greatly by the study performed.

Works Cited (10 pts) - APA format with a minimum of eight sources. Use parenthetical citations where appropriate. Use reputable sources. No wikipedia!

The paper should be double-spaced with 12-point font and one-inch margins. Include a title page. Each section should be properly labeled. No personal pronouns should be used anywhere in the paper. No hard copy will be submitted. Papers will be submitted to google classroom and scrutinized for plagiarism.