



# WRITING LAB REPORTS

*Adapted with permission from Dr. Brian Maricle, Department of Biological Sciences, Fort Hays State University*

## Basic Characteristics

- ❖ Typed.
- ❖ Double spaced.
- ❖ Past tense.
- ❖ Third-person narrative. Do not write, “I/we extracted pigments from spinach.” Instead, write, “Pigments were extracted from spinach.”
- ❖ Scientific names are italicized and the genus name is capitalized (e.g., *Homo sapiens*).

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Full lab reports generally contain the following elements, with headers:

### Title

Use a descriptive title. For example, the title of a lab exercise may be listed as “Fast Plants.” The title should explain the experiment: “The effect of increasing fertilizer on growth rates in fast plants.”

### Introduction

Briefly describe the system under study. Include enough information for the reader to understand the significance of the experiment. Most background material will be presented here. After explaining your topic, conclude with a clear statement of your hypotheses.

### Materials and Methods

The Materials and Methods should be written so that a person who has never seen the experiment could repeat it. Detail the experimental design, materials, and measurements. Do not make a bulleted list; instead, narrate your methods. Describe the materials, and explain what was done in past tense. What data did you collect, how did you collect it, and what did you do with the data after you collected it? This should not read like a set of instructions.

### Results

Present your data and include any charts or tables. Label the axes on your graph(s), including units. Provide a title for all tables and figures that describes the contents well enough without further explanation. The written portion is usually short. Summarize the data and point out trends



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(but do not explain the trends yet). When your reader looks at the graphs, what should they see? Present the results so the data supporting or refuting each hypothesis is in the same order of the hypotheses stated in the introduction.

## **Discussion**

Explain your results, stating why the data looks the way it does. Which hypotheses were supported, and which were not supported? Why? If you think the data are unreliable, explain what factors made them so. When you are done, check this section against the introduction: you should cover approximately the same concepts in both. Offer recommendations for any repeated experiments.

## **References**

Cite the sources used for background information in your introduction and discussion. Do not forget to cite the source for your methods unless they are your own. Cite anything you refer to; when in doubt, cite the source. If you are citing a web page, include the web address and the date you accessed the web page. Use extreme discretion when citing websites—is the source reliable? Start a new page for your bibliography and cite source using the FHSU Writing Center’s Scientific Citations handout or with your instructor’s guidelines in mind.

## **Examples of Citations**

### Journal Articles:

Temple, S. A. 1977. Plant-animal mutualism: coevolution with dodo leads to near extinction of plant. *Science* 197:885-886.

### Books:

Raven, P.H., Evert, R.F., Eichhorn, S.E. 2005. *Biology of Plants*. W.H. Freeman and Company. New York, 686 pp.

### Additional Notes:

- ✓ Write with simple, declarative sentences. Break long sentences into shorter sentences.
- ✓ Avoid personification, slang, contractions, a conversational tone, and informal words (e.g., “got”).