Biology Lab Reports

A lab report is a very structured type of writing, and it is important to put the right things in the right places. Here are some guidelines as to what goes where.

1. Abstract
   - Is brief (fewer than 250 words).
   - Includes 1-2 sentences each of summary for introduction, methods, results, and conclusion.
   - Is easiest to write last, once you know what every other section discusses.

2. Introduction
   - Provides all the context a reader needs to be able to understand and interpret the results.
   - Discusses current understanding of topic with relevant studies in a “funnel shape,” beginning broadly and narrowing down to the exact inquiry.
   - Describes what will be done in this study including objectives and hypothesis.

3. Methods and Materials
   - Is written in past tense; many professors are moving away from passive voice, but the custom is still discipline-specific, so ask the instructor to be sure.
   - Describes everything about how the experiment was performed (What? Where? When? How?).
   - Includes relevant info, such as materials used, organism (with the Latin name listed in italics afterward), and methods of data analysis.
   - **Note:** If the procedure used is well-known or published, you may reference it rather than rewrite it.

4. Results
   - Describes analyzed data, not raw data; for example, average length instead of individual length.
   - Guides the reader through—and refers to—all tables or figures.
   - Points out trends in data and comparisons between data, including the direction of difference (such as which variable was larger), not just that there was a difference between variables.

5. Discussion
   - Conceptually links to the introduction with a brief recap at beginning of section, specifically through discussion of data in terms of objectives and hypothesis and comparison of this study’s conclusions with those of others.
   - Addresses any issues with experimental design or data collection that may have influenced results.
   - Presents an interpretation of the larger meaning of this work.

6. Literature Cited
   - Uses a different format with each journal. Check with your instructor for specific format.
   - No matter the requested format, **must** be consistent.

(continued on reverse)
7. Tables and Figures
   - Need descriptive captions; figure legends go below figures and table legends go above tables.
   - Are not be raw data.
   - Are understandable without reading the entire report/manuscript.
   - Should be referred to sequentially in the text, excluding none.

For more information on writing lab reports, see:
The St. Martin's Handbook (7th ed): 36, 854-72
http://www.unc.edu/depts/wcweb/handouts/sciences.html