Lab Report: Typically divided into 6 / 7 major sections:

1. **Abstract:** In the Abstract, summarize the problem addressed, why the problem was addressed, your approach to the problem, and the major findings and conclusion of your study.

   *You can think of the Abstract as a miniature version of the whole lab report. Read each section of the report and boil it down to a sentence. This means that you need to determine the most important information in each section.*

2. **Introduction:** Often only 1 or 2 paragraphs long, tells why the study was undertaken. A brief summary of relevant background facts leads to a statement of the specific problem being addressed. You can also describe the specific hypotheses that you set out to test, and the basis for those hypotheses.

   *Opening sentence for the lab report (just suggestions – consult your TA/lab manual/books): "This laboratory experiment focuses on X..."; "This laboratory experiment is/was about X..."; "This lab is/was designed to help students learn about, observe, or investigate, X..." Or begin with a definition of the scientific concept: "X is a theory that..."*

3. **Materials & Methods:** This section is your reminder of what you did, and it also serves as a set of instructions for anyone wishing to repeat your study in the future.

4. **Results:** Centrepiece of your report. Include the major findings of the study. Present the data or summarize your observations using graphs and tables to reveal any trends. Point out major trends to the reader. It is helpful to have tables and graphs in this section. Avoid interpreting the data in this section.

5. **Discussion:** How do your results relate to the goals of the study, as stated in your Introduction, and how do they relate to the results that might have been expected from background information obtained in lectures, textbooks, or journal articles? Do your results support or argue against the hypotheses presented in your Introduction? What new hypotheses might now be formulated, and how might these hypotheses be tested?

   *Experimental science is all about testing hypotheses. Thus, the statement of whether or not your hypothesis has been supported is critically important to the lab report. It is by no means a failure if your data do not support your hypothesis; in fact, that can be more interesting than the other way around, because you may find a new perspective for looking at the data. Failure to support hypotheses is common in science, and often serves as a starting point for new experiments.*

6. **Conclusion:** Write a paragraph summarizing what you have learned about the scientific concept of the lab from doing the lab. Back up your statement with details from your lab experience. Since the purpose of the lab is to learn something about science, take the time to write a Conclusion that convinces the lab instructor of what you have learned.

7. **Literature Cited:** The References section includes the full citation for any references that you have cited in the report. Cite only material you have actually read. However, there may be a case where you may have to cite a source that you have not actually read. For e.g., results reported by Smith (1999) may have been cited in a book or article written by Jensen (2015), and you could read only the work by Jensen. Make every possible effort to read the original work. However if that is not possible then your citation should read "(Smith, 1999, as cited by Jensen, 2014)". In Literature Cited section of your report, you would include both sources.