I. Title
The title of a lab report or research paper orients the reader to the major objectives or findings of the study. The title should contain key words from the study and should be as precise and concise as possible.

II. Abstract
The abstract is the condensed version of your report; usually a 150-300-word paragraph, the abstract conveniently summarizes the objectives, methods, results, and conclusions of the project. They contain only the pertinent information from each section of the report. Normally they are written last, after the body of the report is composed.

III. Body of Lab Report

1. Introduction and Background
The introduction of a lab report provides context and background for the readers. It has three goals:

   - Provide context for the scientific concept, theory, principle, or procedure explored in the lab; this might entail an introduction of key concepts, definition of terms, and/or summaries of key references or literature in the field.
   - Provide a purpose statement for the lab; identify how this research relates to the key references identified above and identify the rationale (or purpose) of the study.
   - List the questions you hope to answer in the course of the lab; describe the questions you had before completing the lab, or ones that arose during your research. Explain how these questions are important in terms of the context of the study.

2. Materials and Methods
The materials and methods section details what you did during the course of the lab and exactly how you did it. This section itemizes your measurements, controls, and variables, as well as your exact lab procedures and equipment. All must be detailed in a precise enough manner that readers can repeat the procedure.

Organize this information carefully, beginning with a description of the materials and transitioning into the methods used to obtain and evaluate the data. Use sub-headings to help organize and focus longer passages. Use specific, concise language and include only those methods and materials pertinent to your results.

Examples of materials: taxonomic information; age, sex, characteristics of human subjects; apparatus, tools, and other equipment; composition, source, and quantities of chemical substances.
**Examples of methods:** describe procedures precisely, including details like temperature conditions; pH; observation periods (time, date, duration, location); location of field work; time of day; weather; description of study site if relevant; statistical methods.

3. **Results**
The results section is a clear and concise report of the results; resist the urge to interpret the data and instead focus on an objective description of the results. The results section should be logically organized and should do two things:

- **Summarize the data and identify patterns or trends.**
- **Illustrate and clarify the results with details, statistics, and tables and figures.** Remember that figures and tables never stand alone; they should be referenced and explained in the text.

4. **Discussion**
Interpret the data, explaining what the findings mean in terms of your original hypothesis, objective, and previous studies. Discuss the connection between the data you collected and your objective or purpose of the lab. Refer to your figures and tables to help support your discussion.

The discussion section has three main goals:

- **Address the questions raised in the introduction;** discuss answers the lab may have provided you, and discuss the importance of these questions in relation to the scientific concept or procedure explored in the study.
- **Identify questions that remain unanswered, uncertainty in lab methods, further investigations that might garner answers, and/or suggestions for improving the lab.**
- **Compare your findings with work of other researchers.**

Like the other sections of the report, the Discussion passages should be logically organized, be clear and concise, and should omit any information not relevant to the objective of the study.

5. **Summary and Conclusions**
The Summary and Conclusion section provides a brief overview of the study, summarizing what has been learned about the scientific concept, theory, principle, or lab procedure. This section might also include predictions, interpretations, and conclusions about how the work might contribute to other experiments or concepts or how it might relate to an understanding of the broader topic.