

Title - Centered, bold, underlined. Short and concise. Include "Lab #" if from textbook

- Purpose:** In a sentence or two, explain why you are doing this lab. What you aim to get from the experiment and/or what content from the course this lab reinforces. Must be quantitatively measurable and or qualitatively observable. Can be merged with introduction and/or hypothesis.
- Introduction:** Summarize information collected prior to the experiment that helped focus the intention of this experiment. This may include any pre-lab questions assigned. Can be merged with purpose and/or hypothesis.
- Hypothesis:** Can use "if...then...because..." statement. Identifies the independent and dependent variable and the reason for the relationship/prediction. Can be merged with introduction and/or purpose.
- Materials:** List of materials needed to conduct the experiment and the amounts where necessary (sizes, quantities). Can reference with Lab #, page # and textbook name if available. List any modifications that differ from referenced material. Can be merged with methods.
- Methods:** Logical sequence of procedures to conduct the experiment. Enough clarity present that the experiment can be repeated solely from your report. Consider indicating any variable that is controlled for. Diagrams can be used to illustrate experimental design if given a title and descriptive support. Can reference with Lab #, page # and textbook name if available. List any modifications that differ from referenced material. Can be merged with materials.
- Results:** Tables and/or graphs and/or diagrams require a descriptive title (ie. Table 1: with description / Fig. 1: with description) such that they can be referred to in following sections. Tables and graphs must be graphically neat and clear. Qualitative observations also included here.
- Discussion:** Show any formulas/statistics for any calculations made. Explain any trends from the data, graphs and tables that relate to the original purpose/hypothesis. Try to account for any unexpected deviations (limitations in measurement tools used, uncontrolled variables, personal errors, revision of hypothesis). Any assigned lab questions are answered in this section.
- Conclusion:** Quite often the conclusion will restate things already said before. This is fine as it serves to reinforce what key ideas the reader is to take with them. Explain why the data supports or rejects your hypothesis. Suggest possible changes to procedure if you were to repeat the lab (to test new ideas, or refine existing experimental design). Identify directions of further study or extensions. Relate content to general population and why it is of value.

Other considerations:

- Start on new sheets of paper – if starting a report from scratch, ideally it is never exposed to the lab (free of chemical stains, water wrinkles)
- Word process the lab report – if necessary, leave blank gaps to draw in tables and graphs or cut and paste if not using digitally created results
- If not word processed, errors can be white out or cross out with a single straight line (no scribbling)
- No pencil in the final report aside from any mathematical calculations
- Write in full sentences apart from materials and methods
- Avoid using "it" to limit confusion of what is being referred to
- Should be written from the 3rd person perspective (do not use "I, me, we, you etc.")
 - Ex. "add water" vs "you then add the water"
 - Ex. "Following analysis it is clear that..." vs "In conclusion I found that..."
- Include units everywhere
- Work cited and References page – any publications or outside sources used need to be properly cited and directly referred to in the body of the lab report
- Raw data can be neatly presented in a **Data:** section appended between the main body of the report and Work Cited page
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