



Rainbow Density Lab: Formal Lab Report Support Sheet



***WARNING:** This sheet is designed to help students avoid common mistakes and errors when writing the formal lab report for the Rainbow Density Lab. You should use this in conjunction with the formal lab report packet because this does not include all parts that should be in each section!

- **Title and Heading:**

-Your group members have last names... be sure to include them!

- **Introduction: (*THIS SECTION IS A LONGER SECTION)**

-Do research and include the information in this section with **IN-TEXT citations**... this means any information or facts you get from a resource are cited at the end of the sentence (NOT the end of the paragraph) that uses this information using MLA format as follows:

- Example (Web, with author): The density of copper is 8.90 g/mL (Smith).
- Example (Web, no author use "Title"): The density of copper is 8.90 g/mL ("Density Basics").

-Topics to explore: density background, density of common materials, why things float or sink in water, why solutions will set on top of each other, how density is used in the real world, ETC. (these are just some ideas to get you started)

-Keep track of all sources used (cite IN-TEXT) and include them in the Works Cited

- **Objective:**

-Single sentence stating the purpose (do not use mine from the lab... put it in your own words)

- **Hypothesis:**

-Single sentence in IF / THEN format... use color order you predicted as your hypothesis!

- **Materials:**

-Copy these from the lab... be sure to add any other materials that you might have used

-Use a bulleted list that is **SINGLE spaced**... this is the only part of the lab that is spaced like this!

- **Procedure:**

-Quick version of the steps used in this lab (do not copy word for word from the lab... use your own words)... be sure to include the exact steps that you used in order to determine the density of each

-Number each step... no paragraphs!

-No "I," "We," or "You" or words like "First," "Next," or "Finally"

-Someone with no knowledge of this lab should be able to do the lab by reading your procedure

-No pictures needed for this particular lab

- **Data:**

- Include ALL of the measurements AND densities for each colored solution in a nicely organized table (don't forget units) using the Table feature of your Word/Pages program
- DO NOT include the calculations or test tube labeling in this section... just the data table!
- Each table should have a **PROPER HEADING** as shown in the format packet... these are NOT the same headings that are given in the actual lab (example: **Table 1.** Table showing data obtained from...)
- If a table is on two different pages, you should hit "Enter" to get it all on the same page!

- **Analysis / Calculations: (*THIS SECTION IS A LONGER SECTION)**

- Explain WHY the colors set up the way that they did, what was different about the solutions and how this contributed to the results, ETC.... LOTS OF STUFF TO EXPLORE AND EXPLAIN HERE!!
- Basic rule of the Analysis section: ALL results (data tables) you get should be ANALYZED and EXPLAINED
- Discuss possible sources of error (do not say there were none because there definitely were... math / calculation mistakes or balance errors are NOT a valid sources)
- Describe multiple ways to improve the lab and make it better ***INCLUDE THIS AND THE SOURCES OF ERROR IN THEIR OWN PARAGRAPH!!**
- Leave space after writing the analysis so you can handwrite (or type) in ONE example color density calculation from the lab... be sure to label it and include all equations, units, and sig figs

- **Conclusion:**

- State the results of the lab in one sentence... this comes first in this section!
- One sentence stating that the hypothesis was supported or rejected... this comes second in this section!
- Describe what was learned from the experiment (No "I")
- Incorporate the answers (BRIEFLY) to the post-lab questions into what was learned (do not list the questions or numbers)... since you may have incorporated some of these answers into other parts of your lab report it is fine to be brief here but all answers should be included!

- **Works Cited:**

- List all sources used in **ALPHABETICAL** order
- Double spaced
- Proper MLA format
- Use this guide on the library's website for help with MLA citations... be sure to click the various links under the "MLA Color Coded Examples" tab: <http://beth.libguides.com/c.php?g=133785&p=875239>
- When citing a WEBSITE: Do not just put the word "Web" in the citation as shown in some MLA formatting sites... include the **ACTUAL ADDRESS** in its place!!

- ***General Errors to Avoid:**

- Each section should have a bolded heading except the Title section which gets a bolded title
- If JUST the section heading (no info from the section though) is at the bottom of a page, hit enter to get it on the same page
- Entire lab report is DOUBLE SPACED except the Materials list
- Use 12 pt. Times New Roman font for the whole report with 1 inch margins
- No "I," "We," "You," ETC. throughout the entire lab report!