This template will walk you through the application of the General Chemical Laboratory Format as it is applied to this particular experiment. Not all parts of the General Format are appropriate for this report.

Instructions for this template: Download this file for editing and delete all text in blue. Replace with the content requested in black. Keep all text in black. (delete these instructions)

[Title: Write an original title that includes something

about pennies and densities and the two times]

[My name]

[My Partner(s)’ name]

Date performed: [Insert the date of the day you collected your data]

Date submitted: [Insert the date you hand in this report]

Introduction: [Write an introduction that includes information about 1) how density is calculated, 2) how a graph can be used to determine density, 3) how water displacement can be used to find volume, and 4) how and when the density of pennies changed.]

Purpose:[State the purpose of the lab. “To measure the density of pennies before and after 1983.” Or some other equivalent statement. ]

Hypothesis: [Predict which you expect to be higher, new pennies or old pennies. Justify your prediction with a reason for your choice.]

Procedure: [Write what YOU DID. May be based on lab instructions but must be rewritten into 1st person and past tense. Should include the specific materials used. Somebody should be able to duplicate your experiment from your instructions.]

Data: [Include any and all measurements here, but NO CALCULATIONS. Include both qualitative and quantitative data. Tables work well. Make sure tables have identifying headers complete with units used. Tables should have a descriptive title. Two tables are appropriate here: one for old pennies, one for new pennies. Attach the raw data (sheets actually used to collect the data) to the back of your report for accuracy verification.]

Data Analysis: [Include the two tables of calculations of mass (Y) and volume (X) of pennies. Show one sample calculation for each column of your calculations table, traditionally the first row. Direct reader to the attached graphs and indicate the data used to create the points plotted. Each graph should have labeled axes with variable name and units, appropriate scales to use the whole graph, a title, a data set of 7 points graphed with a straight best fit line. State the points chosen to assess the slopes of the best fit lines and both slope calculations done to find the density for each type of penny. These two densities are your results. State them clearly. You cannot proceed without finding the slopes. Do not use any alternate procedure to assess density.]

Discussion: [Answer the three “Discussion questions” from the lab sheet. The first asks for a % error for your density of the old pennies. The second asks for an element identification suggested by your density of the new pennies. The third asks for two possible sources of error, *not* mistakes. Think of errors that could influence the data you measured. The fourth is optional.]

Conclusion: [Refer back to your purpose by restating it. Did you meet the purpose? Refer to your hypothesis by restating it. Did your results support your hypothesis or refute it? Point to the specific data that causes you to make your conclusion. Be specific.]

Check your report for spelling and grammar issues. Print it. Staple the graphs and the original lab sheet with the raw data to your report. (If you have printer issues, you can email your report to me and hand in your graphs and lab sheets separately.)