Chemistry Lab Report Guidelines
Updated as of 3/7/12

• Format

- 12pt Arial or Times New Roman font ONLY
- 1.5 spaced
- Bold section headings
- 8.5"x11" white paper
- 0.5" margins on all sides
- Stapled in following order:
  - Title page
  - Lab report
  - Carbon Copy pages used during lab
  - Carbon Copy pages used for discussion questions
- THIRD PERSON, PAST TENSE, PASSIVE VOICE!!!!
  - We know you wrote it…your name is on the front…use third person
  - You already finished the lab before you did your report! Use past tense!
  - I know your English teachers don't like passive voice…but it is appropriate for lab reports!
    - Active voice: The hot plate stirred the reaction for three minutes.
    - Passive voice: The reaction was stirred by the hot plate for three minutes

• Title Page

- It gets its own page!
- Title of lab
- Abstract (see below)
- Group members and how they contributed
- Date
- Class and period

• Abstract

- Goes on Title page (2" margins)
- 1st sentence – What was the purpose of the experiment? The question or statement
- 2nd sentence – What you found (results…The silver alloy beads were found to contain X% of silver)
- 3rd sentence - How your results were determined (Brief! Specific names of lab techniques if applicable)
- 4th sentence – report accepted value (if applicable) and percent error
- 5th sentence – Conclusions made (if applicable)

• Background

- DO NOT copy info from lab worksheet!
- Summary/explanation of the important chemistry topics covered in lab
- Explain how the topics relate directly to the lab
  - What will your lab be discovering/testing related to the topics
  - What is your experimental question/variables
- Include relevant chemistry vocabulary
- Relevant Chemical equation(s)
  - Including balancing and states
  - Each Equation should be numbered to make referencing easier
- Hypothesis if applicable
  - If _____, then _____, BECAUSE _____. Everyone forgets the BECAUSE part!
  - Relate it back to the topics covered

• Materials

- List of materials used in lab

- Include drawings of the set up when appropriate!
    - Label and color drawings!

• Procedures (not always included in the report)

- Explain steps of the lab IN YOUR OWN WORDS
- Must use complete sentences
- Steps should be detailed enough that someone could reproduce your experiment
- Include warnings about safety or trouble spots in the lab where things might go wrong.

• Observations/Data (*individual for each lab member***)**

- Qualitative and quantitative!
- Lab notebook paper only with data tables graphs made/collected DURING the lab
- Remember…
    - Sig figs
    - Label graphs and tables
    - Give everything a descriptive title
    - Units
    - Black or blue **INK ONLY**

• Data Analysis (can be done in lab notebook at times)

- Include table and graph of anything you calculated, manipulated or plotted AFTER lab was over
    - Label appropriately
- Explain data that you collected
- Mention any errors and how they affect your data analysis
- Include percent errors if applicable
- Include one sample calculation for each type of calculation performed
    - Include equations, reactions, units, work, etc.
    - Define symbols/variables
- Include a couple sentences explaining what graphs/tables show
- You may be graded on the accuracy of your lab data and whether your calculations are correct or not.

• Discussion Questions (*Individual by each lab member***)**

- Answers to the lab questions or statements or calculation with work.
- Each question should be numbered and answered in complete sentences
- Restate the question in your answer, don't copy the question!
- Will sometimes be done on Carbon Copy paper individually. *Still include this section in the report, but simply say "Refer to Carbon Copy pages at the end of the report"*

• Conclusion

- Complete sentences and paragraph form.
- Report your final results
- Include accepted value and percent error if applicable
- Explain why it turned out the way it did
    - 3+ different Errors? – How those errors affect the result
    - Limits in lab design?
- Relate findings back to basic principles of chemistry
- What further experiments might you do to continue studying this?
- How does it relate to real life (if applicable)?
- How could you make improvements to the lab?

• References

- List all sources, e.g. lab manual, textbook, course packet, etc.
- Use MLA format