Generic Chemistry Lab Report Guidelines – Specifics given in class supersede these generic guidelines!  Please Note: Labs grades are based on quality not just completion! Articulating ideas clearly is key to science!		
REQUIREMENTS	AREAS TO IMPROVE UPON	
<u>Format</u>	Formatting 1 2 3 4 4	
$\square$ 10pt Times New Roman or Arial font ONLY	10pt correct font	
$\square$ 1.5 spaced	0.5-in margins	
$\square$ Bold section headings for everything	1.5-in spacing ☐ Yes ☐ No	
$\square$ 8.5"x11" white paper	Stapled In Order ☐ Yes ☐ No	
$\square$ 0.5" margins on all sides	3 <sup>rd</sup> Person ☐ Yes ☐ No	
$\square$ Abstract has 2" margins on each side and is single-spaced.	Past Tense	
☐ Stapled in following order:  o Title page o Lab report o Carbon Copy pages used during lab (Must have HEADER filled out on every page)	Section Headings	
o Carbon Copy pages used for lab report and post lab Q's	2-in margins	
<ul> <li>□ THIRD PERSON, PAST TENSE, PASSIVE VOICE!!!!</li> <li>o We know you wrote ityour name is on the frontuse third person</li> <li>o You already finished the lab before you did your report! Use past tense!</li> <li>o I know your English teachers don't like passive voice but it is appropriate for lab reports!</li> <li>• Active voice: The hot plate stirred the reaction for three minutes.</li> <li>• Passive voice: The reaction was stirred by the hot plate for three minutes</li> </ul>	Single Spaced Yes No	
Title Page	Title Page 1 2 3 4 1	
☐ It gets its own page!	Own page	
☐ Title of lab	Title	
Abstract (see below)	Abstract present ☐ Yes ☐ No	
Group members and how they contributed (Name, section worked on)	Group members ☐ Yes ☐ No	
☐ Date of lab experiment	Date	
☐ Class and period	Class and period ☐ Yes ☐ No	
Abstract	<u>Abstract</u> 1 □ 2 □ 3 □ 4 □	
On Title Page (2-in margins)	Purpose Percent error*	
☐ Justified on both sides, do not center on page!	☐ Yes ☐ No ☐ Yes	
<ul> <li>The following is to be articulated concisely in no more than 3-5 sentence sin the order below</li> <li>Sentence 1: What was the purpose of the experiment? The question or statement. Do not copy from lab handout.</li> <li>Sentence 2: What you found out (the results – the silver alloy beads were found to contain X% of silver)</li> </ul>	Results  Yes No  Conclusions made  Yes  No  Yes  No  No  No  No  No  Short, concise and clear	
<ul> <li>Sentence 3: How the results were determined (Brief! Specific names of lab techniques if applicable)</li> <li>Sentence 4: Report accepted value (if applicable) and percent error.</li> <li>Sentence 5: Conclusions made (if applicable), what you drew from the experiment</li> </ul>	Named techniques*  Yes No  Accepted value*  Yes No  *if applicable	
	п арричано	

Background – part of prelab if required	Background 1 2 2	3 🗆 4 🗆		
☐ Do NOT copy info from lab worksheet!	In Own Words	Defined Vocab		
☐ Summary/explanation of the important chemistry topics covered in lab	Yes	☐ AII		
☐ Explain how the topics relate directly to the lab	□ No	Some		
☐ What will your lab be discovering/testing related to the topics	Chem Topics Explained	None		
☐ What is your experimental question/variables	All	Chem Rxns*		
	Some	☐ All balanced w/ states		
☐ Include relevant chemistry vocabulary	☐ None or incorrect	☐ Some or not bal/states		
☐ Include relevant chemical equations	Connection to Lab	☐ None or wrong		
☐ Include balancing and states for chemical equations		Hypothesis*		
☐ Number each equation to make referencing easier	Some	Yes and correct format		
<ul><li>☐ Hypothesis if applicable</li><li>• If, then, BECAUSE</li></ul>	☐ None or incorrect	☐ Yes but lacking		
Everyone forgets the BECAUSE portion!  Relate it back to the topics covered	Exp. Q/Variables	☐ Not included		
☐ Be sure to site any references used including textbook,	☐ All identified	References*		
website, lab manual, etc. Below is a good explanation of	☐ Some identified	$\ \square$ Yes and ACS format		
ACS formatting.  • https://libguides.williams.edu/citing/acs	□ None	☐ Yes but lacking		
	*if applicable	☐ Not included		
Observations/Data	Data Table 1 2 2 3	3 4 0		
☐ Qualitative and quantitative! Must have both!	Observations	Professionalism		
☐ Lab notebook paper only, with data tables and graphs made/collected DURING the lab	☐ Significant, detailed,	☐ Total pro, ruler		
☐ Professional appearance	thorough  Sufficient	used, readable, etc		
<ul><li>Clear, large, not squished!</li><li>Black or blue ink ONLY</li></ul>				
Descriptive titles	☐ Lacking	Lacking		
☐ Sig figs for measurements and calculations	<u>Titles</u>			
	☐ Strong, descriptive, clear			
Label graphs/tables with name of measurement and units	_	☐ Good, attempt at being descriptive		
	☐ Unclear, not descriptive			
Calculations	Calculations 1 2 2	3 🗆 4 🗆		
☐ Work shown completely	Work Shown	<u>Units</u>		
☐ Flow of work is clear	☐ Significant, detailed,	$\square$ All		
☐ Work set up correctly to solve actual problem	thorough	Some		
☐ Correct numbers used in work	Sufficient	☐ None or wrong		
☐ Units provided everywhere	Lacking	Compost Anomore		
☐ Correct answer	Organization of Work	Correct Answers		
	☐ Clear	□ Most		
	☐ Hazy	_		
	☐ Cloudy	Some		
	-			
	Correctly Set Up			
	☐ All ☐ Most ☐ Some	e 🗆 None		

Data Analysis	Data Analysis 1 2 2	3 🗆 4 🗆
<ul> <li>□ Include table and graph of anything you calculated, manipulated or plotted AFTER the lab. Make sure tables and graphs are labeled correctly</li> <li>□ Explain data that you collected</li> </ul>	Data/Graphs  All included	% Error  Yes
☐ Include a few sentences explaining what the graphs/tables show or indicate	<ul><li>☐ Missing some</li><li>☐ Not included</li></ul>	☐ No ☐ Wrong
<ul> <li>□ Mention any errors and how they affect your data analysis. Remember "human error" is not an acceptable phrase.</li> <li>□ Include percent errors if applicable</li> <li>□ Include one sample calculation for each type of calculation performed</li> <li>□ Include equations, reactions, units, work, etc.</li> <li>□ Define symbols/variables used</li> <li>□ You may be graded on the accuracy of your lab data and/or whether your calculations are correct or not</li> </ul>	Labels  All Some None or wrong  Explain Data/Graphs All Some None Significant errors Not significant ones Did not explain impact Not included	Sample Calculations  All Some None or wrong  Eq's, Rxns, Units, etc All Some None or wrong  Accuracy Great Ok Poor
Discussion Questions		
Answers to provided lab questions, statements, or calculations with work shown and units when appropriate.  Each Q is numbered and answered in complete sentences.  Restate the question in your answer, do not just copy the Q!  Will sometimes be done as part of a formal report as a group, or done individually on the carbon copy paper in your notebook.  If done on carbon copy paper but a formal lab report is also typed up, then you must include this section heading in the report but simply say "refer to carbon copy pages at the end of the report."  Will sometimes be graded for completion, and sometimes will be graded for accuracy.	Discussion Questions  Questions All included Missing some Not included  Complete Sentences All Some None All Some None	Calculations w/ Work  All Some None Correct Answer All Most Few None
	Conclusion 1 2 2	3 🗌 4 🗎
<ul> <li>☐ Complete sentences, paragraph form</li> <li>☐ Report your final results</li> <li>☐ Include accepted value and % error if applicable</li> </ul>	Complete Sentences  Yes No	Relate to Chem Topics  Yes No
Explain why it turned out the way it did – sources of error, limits in lab design, etc.	Results Reported ☐ Yes ☐ No	Further Experiments  ☐ Yes ☐ No
<ul> <li>□ Relate findings back to basic principles of chemistry</li> <li>□ What further experiments might you do to keep studying this?</li> <li>□ How does it relate to real life if applicable?</li> <li>□ How could you make improvements to the lab?</li> </ul>	Accepted Value / % Error  Yes No  Errors  Yes No	Relates to Real Life  Yes No  Improvements  Yes No
	Level of Detail   Significant	t $\square$ Sufficient $\square$ Lacking