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|  | **Beginning** | **Developing** | **Accomplished** | **Exemplary** |
| **Pre-Lab**  **Basics** | o Lab report ***has not*** demonstrated clear communication, objectives and hazardous materials assessment. | o Lab report with ***somewhat*** clear communication, objectives and hazardous materials assessment. | o Organized lab report with ***mostly*** clear communication, objectives and hazardous materials assessment. | o Organized and professional lab report with clear communication, definitive objectives and thorough hazardous materials assessment. |
| **Procedure**  **/Flowchart** | o Lab could ***not*** be reproduced if procedure repeated by an outside party. | o Lab could be ***somewhat*** reproduced if procedure repeated by an outside party. | o Lab could be ***mostly*** reproduced if procedure repeated by an outside party. | o Lab would be reproduced if procedure repeated by an outside party. |
| **Data** | o Data is incomplete. | o Data is ***somewhat*** complete. | o Data is ***mostly*** complete. | o Data is complete. |
| **Calculations** | o Calculations ***have not*** communicated understanding of the concepts covered in this lab. | o Calculations ***somewhat*** communicates understanding of the concepts covered in the lab. | o Calculations ***mostly*** communicates understanding of the concepts covered in this lab. | o Calculations ***clearly*** communicates understanding of the concepts covered in this lab. |
| **Graphs** | o ***Does not*** demonstrate the relationship between variables. | o ***Somewhat*** demonstrates the relationship between variables. | o ***Mostly*** demonstrates the relationship between variables. | o ***Clearly*** demonstrates the relationship between variables. |
| **Discussion** | o Discussion questions are ***not*** answered completely and do not connect concepts explored in lab to theory. | o Discussion questions ***somewhat*** answered completely and connect concepts explored in lab to theory | o Discussion questions are ***mostly*** answered completely and connect concepts explored in lab to theory. | o Discussion questions are answered completely and connect concepts explored in lab to theory |
| **Conclusion** | o Conclusion is incomplete and/or does not demonstrate an understanding of the concepts covered in this lab. | o Conclusion is complete and demonstrates ***some*** understanding of the concepts covered in this lab. | o Conclusion is ***mostly*** thorough, demonstrating an understanding of the concepts covered in this lab. | o Conclusion is thorough, demonstrating a strong understanding of the concepts covered in this lab. |

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| **Pre-Lab**:   * includes all of the following: Subject, Unit, Name, Partner’s Name, Date of Lab completion * title that reflects the purpose of the lab * purpose that clearly identifies objectives of the lab * all materials are listed and all Hazardous Materials are listed in HEM   **Procedure/Flowchart**:   * excellent organization * clear and concise * includes diagrams/pictures of apparatus’ used throughout the lab * all steps are included and flow from one step to the next   **Data**:   * tables are well-organized * proper sig-figs and uncertainty * includes units * includes label/heading * multiple trials for each point if applicable | **Calculations**:   * ordered in a stepwise fashion * includes correct units * calculations are free from errors   **Graphing**:   * title follows x vs. y for “process being analyzed” * axis labelled with units * lines/curves of best fit include equation * line of best fit is not “forced” through the origin   **Discussion/Conclusion**:   * questions are answered completely and connect to theory * all answers demonstrate a thorough understanding of the concepts   **Conclusion**:   * conclusion answers purpose by comparing key results to predictions/hypothesis (supported/no supported) * connects to big picture and asks new question questions and suggests new experiments |