**Formal Lab Report Grading Rubric/2011updated 10-30-11**

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| ***HEADING*** | - lists name, date, title on top left corner |  |
| ***PLANNING*** |  |  |
| ***Introduction*** | -states objectives of investigation  -provides a rational explanation of why lab is performed  -includes purpose, research question and/or hypothesis  -hypothesis prediction is reasonable |  |
| ***Variables*** | -Independent variable is properly identified  -Dependent variable is properly identified  -Controls are properly identified with a sufficient description of effort to control them |  |
| ***Materials*** | -provide a complete list of equipment and chemicals used  -uses proper terminology  -lists proper sizes of glassware |  |
| ***Methods*** | -includes how, when, where experiment was conducted  -procedure is written in a manner the experiment could be reproduced  -written in third person passive voice  -details number of replicates and describes how sufficiency was deemed |  |
| ***DCP*** |  |  |
| ***Data*** | -clearly identified tables  -tables are numbered and titled  -units and uncertainty included  -complete/accurate/sufficient presentation of data  -brief description of results under each table |  |
| ***Calculations*** | -showed one calculation of each type used in interpreting the results (generic followed by specific)  -data was processed correctly  -SF/precision were considered with measured data |  |
| ***Graphs*** | -must be properly scaled  -units must be labeled  -independent on *x*, dependent on *y*  -must be correct type of graph to best describe data  -best fit curve is better choice than connection of data points |  |
| ***DEC*** |  |  |
| ***Discussion*** | -introduction  -summarizes of data trends (how did independent variable affect the dependent)  -explains how data was analyzed to form conclusion  -heart of the lab/should distinguish yours from others |  |
| ***Evaluation of Method or Procedure*** | -discusses confidence or lack of  -evaluates method/suggesting weaknesses  -explains errors or losses  -results should be compared to literature values, or accepted scientific understanding  -provide a statistical analysis if applicable(% yield or error)  -includes suggestions as to what to do differently if the lab were to be repeated |  |
| ***CONCLUSION*** | -answers if the purpose was achieved or if hypothesis was validated  -statement should be briefly supported with numerical data  -may discuss extensions to the lab and suggest areas of further study |  |
| ***SOURCES*** | -properly cites all sources used |  |
| ***OVERALL IMPRESSION*** | -entire lab written in proper tense  -clearly written and articulate  -proper formatting  -gave an organized best effort |  |

c = aspect fulfilled completely p = aspect partially fulfilled n = not at all NA = not assessed