**Formal Lab Report Grading Rubric/2012/REV OCT 30**

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| ***HEADING*** | - lists name (1) , date (1), title on top left corner (1)  The title should communicate the problem to be solved. (2) |  |
| ***PLANNING*** |  |  |
| ***Background/Introduction*** | -includes sufficient background information to set the tone  -clearly states objectives/purpose of investigation and  -hypothesis is clearly stated  -prediction of hypothesis reasonable |  |
| ***Variables*** | -Independent variable is properly identified and how it will be manipulated is clearly described  -Dependent variable is properly identified and the method of measurement is described  -Controls are properly identified with a sufficient description of effort to control them |  |
| ***Materials*** | -provides a complete list of equipment and chemicals used  -uses proper terminology and brand identification of equipment  -lists proper sizes of glassware |  |
| ***Methods*** | -includes how, when, where experiment was conducted  -procedure is written in a step-by-step manner from which the experiment could be reproduced  -details number of replicates and describes how sufficiency was deemed (based on nature of investigation and time available) |  |
| ***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*** | -shows one calculation of each type used in interpreting the results (generic followed by specific)  -data processed correctly  -SF/precision considered with measured data |  |
| ***Graphs*** | -properly scaled  -units labeled  -independent on *x*, dependent on *y*  -correct type of graph to best describe data  -best fit curve is better choice than connection of data points |  |
| ***DEC*** |  |  |
| ***Discussion*** | -introductory sentences included  -summarizes data trends (how did independent variable affect the dependent)  -explains how data was analyzed to form conclusion  -results compared to literature values, or accepted scientific understanding  -heart of the lab/should distinguish yours from others |  |
| ***Evaluation of Method or Procedure*** | -generally discusses confidence or lack of  3 paragraph format. Each paragraph should contain:  -what is the error or loss  -how would this error/loss affect outcome  -what would you do differently in the future to avoid this error/loss  --statistical analysis provided if applicable(% yield or error) |  |
| ***CONCLUSION*** | -answers if the purpose was achieved or if hypothesis was validated  -statement should be briefly supported with numerical data  -provide extensioin to lab suggested for areas of further study |  |
| ***SOURCES*** | -properly cites all sources used |  |
| ***OVERALL IMPRESSION*** | -entire lab written in proper tense  -clearly written and articulate  -properly formatted  -gave an organized best effort |  |

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