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| --- | --- | --- | --- | --- |
|  | **Beginning** | **Developing** | **Accomplished** | **Exemplary** |
| Presentation/Format | o Frequent, obvious grammatical and spelling errors that confuse the reader o Headings are missing o Sections are missing  | o Some distracting grammar and spelling errors which do not create confusion o Title/headings are not underlined o All sections are included, but out of order | o Minimal grammar and spelling errors o Title/headings are underlined o Standard lab report format is followed | o Grammar and spelling correct throughout o Title/headings are neatly underlined with ruler o Crisp, neat, organized and professional lab report format |
| Flowchart – due on the day of the lab | - Unorganized- No diagrams- Procedure is mostly copied/not in own words- Many steps are missing or unclear  | - Unorganized- Diagrams are unclear- Words commands are unclear- Some minor steps are missing or unclear | - Organized- Diagrams clear- Clear word commands, but not concise- All steps included | - Excellent organization, easy to follow.- Diagrams clear and catch the eye- Clear, concise word commands- All steps included with originality /creativity |
| Performance/ Observations(During the lab) | -Just watched the lab be performed and/or didn’t clean-up-Only ½ of the data is included or almost impossible to read data-Could not answer the mystery question fully | -Needed some help to follow the procedure and/or clean up-Most data/observations included or date recording messy-Answered the mystery question correctly when given a bit of help | -Followed the procedure an cleaned up-All data/observations included and neatly recorded-Answer the mystery question correctly | -Followed the procedure carefully including cleaning up-Detailed/thorough data/observations included and neatly recorded -Answered the mystery question easily and thoroughly |
| Data | o Original data missingo Tables are missing headings/units  | o Data complete but messy o Tables not organized/neat o All table headings include ***most*** units | o All tables are neatly prepared o All table headings include proper unitso Data is clear and complete | o All tables are neatly prepared ***with a ruler*** o All table headings include proper unitso Data is clear and complete |
| Calculations | o Major calculations are missing o It is difficult/impossible to follow calculation progression  | o Calculations are ***somewhat*** ordered in a step-wise fashion o ***Some*** calculations are easy to follow as they move from solving one variable to the nexto ***Some*** calculations includes a statement of understanding: (Fnet = Fg1-Ff) | o Calculations are ***mostly*** ordered in a step-wise fashion o ***Most*** calculations are easy to follow as they move from solving one variable to the nexto ***Most*** calculations includes a statement of understanding: (Fnet = Fg1-Ff) | o Calculations are ordered in a step-wise fashion o ***All*** calculations are easy to follow as they move from solving one variable to the nexto ***All*** calculations includes a statement of understanding: (Fnet = Fg1-Ff) |
| Graphs | o ***No*** title o ***No*** ruler used for axis/line o ***No*** axis labels o Scale increments intervals unequal /incorrect o Many data plots missing/incorrect o ***No*** line or curve  | o Title does not follow “Y vs. X” or improper placement of independent (X) and dependent (Y) variables o Axis not drawn with ruler, labelled with measurement and unitso A few errors in uniformity of scale o A few data plots are unclear/ incorrect o Line/curve not best fit  | o Title follows “Y vs. X”, without description of process being analyzed o Axis drawn with ruler and labelled with measurement and unitso Uniform scale that includes origin but does not use space effectively o Line of best fit “forced” through origin | o Title follows “Y vs. X”, and includes description of process being analyzed o Proper placement of independent (X) and dependent (Y) variables o Axis drawn with ruler (or on computer) and labelled with measurement and units o Uniform scale that includes origin and uses space effectively o Line/curve of best fit represent data plots  |
| Discussion (completed after the lab) | --Fragments or point form-Does not demonstrate a **basic understanding** of concept. Substantial errors throughout | -Sentence structure lacking or confusing-Demonstrates a basic understanding of concepts. Errors and inconsistency reveal some missing understanding of the concepts. | -Full sentences, well structured-Demonstrates a solid understanding of concepts. Most answers are correct with only a few errors. | -Full sentences, well structured-Demonstrates complete and in depth understanding of concepts. |
| Conclusion (completed after the lab) | - Point form - only 1 or 2 pieces of criteria are covered but not thorough- Personal opinions are included “I like this lab” or, “This lab was FUN!” | - Sentence structure lacking - 3 or 4 pieces of criteria are missing or incomplete | - Full Sentences, well structured- 1 or 2 pieces of criteria are missing or incomplete | - Full Sentences, well-structured and thorough/detailedAll criteria listed below must be included:- Answers purpose - summary of results and what they mean - Interesting Findings- States sources of error- Connects results to big picture (relevance)- Asks new questions-Suggests improvement to this lab |

**Newton’s 2nd Law**

**Physics 11– Lab pre and post assessment Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**During**

* Fully participates and follows the steps of the lab including clean up
* Data table filled out – fully and neatly
* Answers the mystery question easily

**Post lab**

* Data
* Calculations
* Graphs
* Answered discussion questions fully and correctly
* Conclusion

**Prelab**

* Predication
* FBD
* Flowchart
	+ Excellent organization
	+ Diagrams clear and catch the eye
	+ Clear concise word commands for each step
	+ All steps included with creativity and originality