Formal Lab Report Rubric *(12-13)*

Introduction	Exceeds	Meets	Partially Meets	Does Not Meet	Not Applicable
Purpose of the lab	The reason for the investigation is **concisely**, accurately, and thoroughly stated.	The reason for the investigation is accurately and thoroughly stated.	The reason for the investigation is incorrectly or only partially stated.	Missing, academically dishonest, or does not partially meet.	
Background information	**All relevant** information on the variables, the known relationships b/w them, and **all pertinent** definitions are thoroughly and accurately described and connected.	Information on variables, the known relationships b/w them, and definitions are accurately stated. Key concepts are present but one or two may not be thoroughly connected or described.	Information on the variables, the known relationships b/w them, and the definitions are only partially stated. Key concepts are missing.	Missing, academically dishonest, or does not partially meet.	
Hypothesis	Predicted relationship between variables and expected outcomes is **concisely** communciated.	Predicted relationship between variables and expected outcomes is stated.	Predicted relationship between variables and expected outcomes is only partially stated.	Missing, academically dishonest, or does not partially meet.	
Scientific Reasoning	The logic behind the hypothesis is **thoroughly and concisely** supported by research discussed in the background information.	The logic behind the hypothesis is supported by research discussed in the background information.	The logic behind the hypothesis is only partially supported by research discussed in the background information.	Missing, academically dishonest, or does not partially meet.	

Formal Lab Report Rubric *(12-13)*

Methods	Exceeds	Meets	Partially Meets	Does Not Meet	Not Applicable
Materials	Listed materials are correct and complete. **All details,** such as quantity, size, and appropriate units (mL, grams, etc.) for each piece of equipment used are included.	Listed materials are correct and complete to the extent that the reader can easily duplicate the experiment.	Listed materials are partially complete or incorrect to the extent that the experiment cannot be easily duplicated.	Missing, academically dishonest, or does not partially meet.	
Procedure	Procedure for both set-up and data collection are correct, complete, and **concise** to the extent that the reader can **fully** duplicate the experiment.	Procedure for both set-up and data collection are correct and complete to the extent that the reader can easily duplicate the experiment.	Procedure for both set-up and data collection are not correct or complete so that the experiment cannot be easily duplicated.	Missing, academically dishonest, or does not partially meet.	
Diagrams	All appropriate diagrams are included, correct, **referred to, and clearly labeled** so the reader can easily duplicate the experiment.	All appropriate diagrams are included and correct so the reader can easily duplicate the experiment.	Diagrams needed for the reader to easily duplicate the experiment are incorrect or not specific enough.	Missing, academically dishonest, or does not partially meet.	
Calculations	All appropriate calculations are included, and correctly, **clearly, and efficiently** explained.	All appropriate calculations are included and correctly explained.	Some needed calculations are incorrect, incomplete, or missing.	Missing, academically dishonest, or does not partially meet.	

Falmouth High School   **Name:** _____

Formal Lab Report Rubric *(12-13)*

Results	Exceeds	Meets	Partially Meets	Does Not Meet	Not Applicable
Data Reporting	Qualitative and quantitative data are **clearly and concisely** reported. SI units and precision are correct based on the instruments used. **No errors** in rounding or significant figures are present.	Qualitative and quantitative data are reported. SI units and precision are correct based on the instruments used. Only minor errors in rounding or significant figures are present.	Significant errors are made in reporting data; inappropriate units or levels of precision are used. Errors in rounding or significant figure usage are common. Some data are missing or incomplete.	Missing, academically dishonest, or does not partially meet.	
Data Explanation (Captions)	Narratives **thoroughly and concisely** highlight key information presented in all included data tables, graphs, and diagrams.	Narratives highlight key information presented in all included data tables, graphs, and diagrams.	Narratives highlight only some of the key information or do not highlight (over-include) data presented in included data tables, graphs, or diagrams.	Missing, academically dishonest, or does not partially meet.	
Calculations	All calculations are correct. Presentation is **logical and efficient** and connection to data is evident. Formulas are included, and **unit analysis** is performed where appropriate.	All calculations are correct. Presentation is clear and connection to data is evident. Formulas are included and final answers have appropriate units.	Error(s) in calculations are made. Connections to data may be unclear or not evident.	Missing, academically dishonest, or does not partially meet.	
Graphs, Tables, and Diagrams	All illustrations are accurate, purposeful, **well designed,** and include a **descriptive** title, appropriate labels (axes, headers, etc.), and units.	All illustrations are accurate, purposeful, usable, and include a title, appropriate labels, and units.	Insufficient illustrations to support the report. Those used may be incomplete or inaccurate, and haphazard in design and execution.	Missing, academically dishonest, or does not partially meet.	

Falmouth High School

Name: _____

Formal Lab Report Rubric *(12-13)*

Discussion	Exceeds	Meets	Partially Meets	Does Not Meet	Not Applicable
Hypothesis Outcome	**Thoroughly** and correctly restates hypothesis and correctly concludes whether orginal hypothesis is supported or rejected.	Correctly restates hypothesis and correctly concludes whether original hypothesis is supported or rejected.	Incorrectly restates hypothesis or does not correctly state whether original hypothesis was supported or rejected.	Missing, academically dishonest, or does not partially meet.	
Support of Hypothesis	Correctly uses **more than three** pieces of data to fully support the **correct** conclusion regarding the hypothesis, referring to illustrations in the text as needed.	Correctly uses two or three pieces of data to fully support the conclusion regarding the hypothesis, referring to illustrations in the text as needed.	Uses some data to support conclusion, but does not fully support conclusion or uses data incorrectly to support conclusions.	Missing, academically dishonest, or does not partially meet.	
Description and Connection of Results	**All** key patterns, principles, and relationships shown in the results are correctly and **concisely** described and connected to the purpose and background information.	Most key patterns, principles, and relationships shown in the results are correctly described and connected to the purpose and background information.	Some key patterns, principles, and relationships shown in the results are described and partially connected to the purpose and background information.	Missing, academically dishonest, or does not partially meet.	
Experimental Methods and Results	Experimental methods and results are **thoroughly and concisely** justified and correctly related back to original hypothesis.	Experimental methods and results are justified and correctly related back to original hypothesis.	Experimental methods and results are incorrectly justified and/or not correctly related back to original hypothesis.	Missing, academically dishonest, or does not partially meet.	
Error Analysis	**All** significant sources of error are identified and correctly explained.	The most significant sources of error are identified and correctly explained.	Significant sources of error are missing or incorrectly explained.	Missing, academically dishonest, or does not partially meet.	
Summary/Going Forward	**Insightful** follow-up questions (next steps) and final conclusions are **thoroughly and concisely** discussed.	Follow-up questions and final conclusions are discussed.	Follow-up questions or final conclusions are not appropriately identified.	Missing, academically dishonest, or does not partially meet.	

Formal Lab Report Rubric *(12-13)*

Abstract a.k.a. Summary	Exceeds	Meets	Partially Meets	Does Not Meet	Not Applicable
Main Objectives	The statement of lab purpose and what is being investigated draw the audience into the report.	The purpose for the lab and what was investigated are each accurately stated.	The reason for the lab or what was investigated is incorrectly or only partially stated.	Missing, academically dishonest, or does not partially meet.	
Methods	The description provides enough detail to completely and correctly describe what was actually done in a clear and concise manner.	The description of what was actually done is correct and complete.	The description of what was actually done is incorrect or incomplete.	Missing, academically dishonest, or does not partially meet.	
Results	An overview of the data from the lab results is correct, complete, and well organized and presented.	The results of the investigation are correctly and completely summarized.	The results of the investigation are either incorrectly or incompletely summarized.	Missing, academically dishonest, or does not partially meet.	
Conclusions	Larger implications of the findings are identified and described based on student conclusion/interpretation of results.	Results from the lab are interpreted and conclusions drawn (referencing hypothesis if appropriate).	Conclusions are not based on collected data, incorrect, or overly simplistic (insufficient reference to hypothesis if appropriate).	Missing, academically dishonest, or does not partially meet.	

Formal Lab Report Rubric *(12-13)*

Work Cited (Bibliography)	Exceeds	Meets	Partially Meets	Does Not Meet	Not Applicable
Citations	Research is compiled from multiple (**3 or more**) reputable sources that are scientific.	Research is compiled from 1-2 reputable sources that are scientific.	Some research is compiled from sources that are not scientific or not reputable.	Missing, academically dishonest, or does not partially meet.	
Formatting	Citations follow the provided format. **No** errors occur.	Citations follow the provided format. One or two minor errors may occur.	Citations are not done using the proper format.	Missing, academically dishonest, or does not partially meet.	

Format	Exceeds	Meets	Partially Meets	Does Not Meet	Not Applicable
Organization and Format	IMRaD format and **all** guidelines correctly followed.	IMRaD format and all major guidelines correctly followed.	IMRaD format or some major guidelines not correctly followed.	Little if any correlation between submitted work and requested format.	
Proofreading	Lab contains **no** major grammatical errors.	Lab contains no more than three major grammatical errors.	Lab contains more than three major grammatical errors.	Quantity and/or severity of errors greatly interferes with communication.	
Clarity	All sections are **well written** and **appropriate** for the target audience.	All sections are understandable and accessible to target audience.	One or more sections are not clearly written and are difficult for the target audience to follow.	Writing is so unclear as to substantially interfere with communication process.	
Presentation	Final draft is **typed, double-spaced**, and neatly presented. **All** text and visuals are **of high quality** and easy to read/see.	Final draft is neatly presented. Most text and visuals are easy to read/see.	Parts of final draft are not neatly presented. Some text and/or visuals are broken up or not logically placed on pages.	Submitted work is not in final draft quality. A significant amount of text and/or visuals is illegible.	