Lab Experiment

Name:

	4. Distinguished	3. Proficient	2. Apprentice	1. Novice
Lab Work-Purpose: Defines goal of experiment	Used clear, accurate language to restate question or problem in student's own words. Provided examples of similar experiments.	Used proper vocabulary to state question or problem.	Stated question or problem using incorrect vocabulary. Did not state problem in student's own words.	Did not state question or problem.
Lab Work-Hypothesis: Prediction between experiment and results	Connection between the problem and predicted outcome was obvious. Provided references showing that hypothesis refuted or defended established knowledge.	Hypothesis and problem were clearly connected. Hypothesis refuted or defended established knowledge.	No clear connection between hypothesis and experiment. No way to prove or disprove hypothesis by performing experiment.	Did not propose a hypothesis, or hypothesis was unrelated to experiment.
Lab Work-Materials and Equipment: List of materials used	Made complete list of materials used. Explained why materials were chosen.	Made complete list of materials used. Showed information about size and units of measurement.	Did not list one or two items used. Did not show details about items used.	List of materials was missing or showed only a few of the materials used.
Lab Work-Methods: Description of process and setup	Setup was documented completely. Method was also documented completely and accurately, making experiment easy to reproduce.	Setup included descriptive text and diagrams were provided if appropriate. Experiment can be reproduced using the steps provided.	Description was general or did not include diagrams. Procedure was missing multiple steps. Information provided is not sufficient to replicate experiment.	Setup was not described or documented. Step-by-step procedure was missing or inadequate.
Lab Work-Data Quality: Accurate measurement and labeling	All data was complete and accurately labeled. Data sampled at appropriate intervals as defined in Methods section of lab report.	All data was complete and accurately labeled. Data was sampled at appropriate intervals.	Data was incomplete. Some data was not labeled using appropriate units of measure. Data sampling intervals inadequate to support hypothesis.	Included little or no relevant data. Data was not labeled using appropriate units of measure. Data sampling intervals were random or inadequate.

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Lab Work-Data Analysis: Student analyzed data and identified trends	Identified and described trends and made appropriate conclusions based on the data. Used statistical techniques to identify and disregard flawed data. Showed calculations.	Identified valid trends and made appropriate conclusions based on the data. Documented calculations made during data analysis.	Only identified obvious trends or found trends not fully supported by the data.	Trends were missing or were not supported by the data collected. Obvious trends were overlooked.
Lab Work-Conclusion: Summarizes findings and compares actual results with expected results	Restated problem and hypothesis. Justified design and methods of experiment. Findings were discussed in detail. Conclusions directly address hypothesis. Statements and conclusions were supported by the data.	Problem was restated. Statements and conclusions were based on the data collected. Showed a strong relationship between conclusions and hypothesis.	Problem was restated. Conclusions were simplistic. No clear relationship between conclusions and hypothesis.	Original problem was not restated. Findings were not summarized. Conclusions were not relevant to hypothesis.

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____ My lab report states the purpose of my experiment.

____ I proposed a hypothesis that can be tested by my experiment.

____ I have a list of materials used in my experiment.

____ My lab report describes the setup and procedure I followed during my experiment.

____ My lab report includes accurately labeled and recorded data from my experiment.

____ My lab report identifies trends in the data I collected.

____ My lab report summarizes the experiment and relates findings to my hypothesis.