

HKHS Common Laboratory Report Rubric (February 2015)

Name _____ Lab _____ Date _____ SCORE _____

Section	10 Exceeds Standard	8.5 Meets Standard	7.5 Approaching Standard	6.5 Below Standard	0 No Attempt	Self-Assessment	Peer-Assessment	Score
Title/ Literature Cited * Weight: __ INQ 6, 2	<input type="checkbox"/> Title fully proclaims content of the lab. <input type="checkbox"/> Bibliography and citations are appropriate and written in APA format. <input type="checkbox"/> Three or more scientific sources are cited to support lab report concepts.	<input type="checkbox"/> Title is consistent with lab with some supportive detail. <input type="checkbox"/> Bibliography and citations are written in APA format with minor errors. <input type="checkbox"/> Citations are sited in the body of the report. <input type="checkbox"/> Appropriate scientific sources are cited to support lab report concepts.	<input type="checkbox"/> Title is consistent with lab. <input type="checkbox"/> Bibliography and citations are written in APA format with minor errors. <input type="checkbox"/> Scientific sources are inappropriate for the lab report concepts.	<input type="checkbox"/> Title is not complete OR does not match problem / purpose of the lab. <input type="checkbox"/> Bibliography and citations are not written in APA format OR have excessive errors OR are missing.				

* Evidence of plagiarism will be dealt with in accordance to the Haddam-Killingworth High School Student Handbook

Introduction (Problem/ Purpose & Hypothesis) Weight: __ INQ 1, 3, 5, 10	<input type="checkbox"/> A well written paragraph that introduces the purpose/problem effectively. <input type="checkbox"/> Significant and insightful connections between all of the principles in the experiment. <input type="checkbox"/> A precisely relevant and testable hypothesis is included in the proper format. <input type="checkbox"/> The independent and dependent variables are clearly stated. <input type="checkbox"/> Appropriate scientific reasoning is included.	<input type="checkbox"/> Purpose/problem demonstrates an overall comprehensive understanding of the experiment. <input type="checkbox"/> Successfully connects the main principles involved in the experiment. <input type="checkbox"/> The hypothesis is clearly stated, relevant to the problem and testable. <input type="checkbox"/> The independent and dependent variables are clearly stated. <input type="checkbox"/> Appropriate scientific reasoning is included.	<input type="checkbox"/> Clearly states purpose/problem and demonstrates reasonable understanding of the experiment. <input type="checkbox"/> Connects the main principles involved in the experiment. <input type="checkbox"/> The hypothesis is relevant to the problem and testable. <input type="checkbox"/> The independent and dependent variables are clearly stated. <input type="checkbox"/> Appropriate scientific reasoning is missing OR flawed.	<input type="checkbox"/> Attempts to make connections between the main principles involved in the experiment. <input type="checkbox"/> One or more of the following applies: <input type="checkbox"/> Purpose/problem is not clearly stated. <input type="checkbox"/> Hypothesis is not related to stated problem OR is not clearly stated OR is not logically testable OR is missing. <input type="checkbox"/> The dependent or independent variable is not correctly identified.				
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Materials & Procedure Weight: __ INQ 4, 6	<input type="checkbox"/> Includes diagrams &/or descriptions/quantities of specific materials/set-ups used. <input type="checkbox"/> A well written list of numbered steps that presents a clear, complete, concise, repeatable procedure that effectively tests the stated hypothesis. <input type="checkbox"/> Keeps all known interfering variables constant. <input type="checkbox"/> A control is clearly specified if appropriate.	<input type="checkbox"/> Specifies the equipment & materials, including quantities used. <input type="checkbox"/> A list of numbered steps that have detail & clarity for someone else to repeat the experiment that properly tests the stated hypothesis <input type="checkbox"/> A clear attempt to keep interfering variables constant. <input type="checkbox"/> States the control when appropriate.	<input type="checkbox"/> Specifies equipment & materials including quantities used. <input type="checkbox"/> All of the following applies: <input type="checkbox"/> Sufficient detail in a numbered list to repeat the procedure that tests the stated hypothesis. <input type="checkbox"/> Attempt is made to keep variables constant. <input type="checkbox"/> States the control when appropriate.	<input type="checkbox"/> One of the "Meets Standard" components is missing OR is poorly executed.				
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Section	10 Exceeds Standard	8.5 Meets Standard	7.5 Approaching Standard	6.5 Below Standard	0 No Attempt	Self-Assessment	Peer-Assessment	Score
Results Weight: ____ INQ 8, 9	<input type="checkbox"/> Tables & graphs are presented in an exceptionally clear and organized manner without any errors. <input type="checkbox"/> Detailed qualitative observations are included when relevant. <input type="checkbox"/> All of the steps & solutions have no mathematical errors.	<input type="checkbox"/> Tables & graphs are presented in a clear & organized manner with one minor error. <input type="checkbox"/> Detailed qualitative observations are included when relevant. <input type="checkbox"/> Almost all of the steps & solution have no mathematical errors.	<input type="checkbox"/> Tables & graphs are presented with some errors such as: <input type="checkbox"/> incorrect/missing descriptive titles <input type="checkbox"/> incorrectly labeled axes <input type="checkbox"/> improper units <input type="checkbox"/> Qualitative observations are included when relevant. <input type="checkbox"/> Most of the steps & solutions have no mathematical errors.	<input type="checkbox"/> One or more “Meets Standard” components of the tables and/or graphs are incorrect OR missing. <input type="checkbox"/> Some of the steps & solutions are free of mathematical errors. <input type="checkbox"/> Calculations / equations are missing.				

Conclusion/ Discussion Weight: ____ INQ 7, 8, 9	<input type="checkbox"/> Clearly & insightfully states the relationship between the data & the problem/hypothesis, showing a complete & accurate understanding of the experiment. <input type="checkbox"/> Appropriately supports statements by quoting data in a meaningful way. <input type="checkbox"/> Addresses real & relevant validity issues with the experiment. <input type="checkbox"/> AND evaluates the effect on the results. <input type="checkbox"/> Includes ideas for future investigations. <input type="checkbox"/> Insightfully relates the investigation to a real-world application.	<input type="checkbox"/> States the relationship between the data & the problem / hypothesis, showing an accurate understanding of the experiment. <input type="checkbox"/> Appropriately supports statements by quoting data. <input type="checkbox"/> Discussion on validity of the experiment identifies & explains real issues. <input type="checkbox"/> AND evaluates the effect on the results. <input type="checkbox"/> Includes ideas for future investigations. <input type="checkbox"/> Relates the investigation to a real-world application.	<input type="checkbox"/> One of the “Meets Standard” components is missing OR incomplete. <input type="checkbox"/> States the relationship between the data & the problem / hypothesis, showing basic understanding of the experiment. <input type="checkbox"/> Supports statements by quoting data in a minimal way. <input type="checkbox"/> Discussion on validity identifies real issues. <input type="checkbox"/> AND effect on the results is minimally discussed. <input type="checkbox"/> Suggestions for improvements are included. <input type="checkbox"/> Relates the investigation to the real-world.	<input type="checkbox"/> Two or more of the “Meets Standard” components is missing OR incomplete.				
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Mechanics & Format Weight: ____ INQ 10	<input type="checkbox"/> Writing is fluid, clear and concise. <input type="checkbox"/> All required guidelines are completely & clearly met.	<input type="checkbox"/> Writing is clear and concise. <input type="checkbox"/> One required guideline is unclear OR missing.	<input type="checkbox"/> Writing is clear with few errors. <input type="checkbox"/> Two required guidelines are unclear OR missing.	<input type="checkbox"/> Writing is unclear OR contains many errors. <input type="checkbox"/> Three required guideline are unclear OR missing.				
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Connecticut State Scientific Standards for Inquiry:

INQ 1: Identify questions that can be answered through scientific investigation.

INQ 2: Read, interpret and examine the credibility and validity of scientific claims in different sources of information.

INQ 3: Formulate a testable hypothesis and demonstrate logical connections between the scientific concepts guiding the hypothesis and the design of the experiment.

INQ4: Design and conduct appropriate types of scientific investigations to answer different questions.

INQ 5: Identify independent and dependent variables, including those that are kept constant and those used as controls.

INQ 6: Use appropriate tools and techniques to make observations and gather data.

INQ 7: Assess the reliability of the data that was generated in the investigation.

INQ 8: Use mathematical operations to analyze and interpret data, and present relationships between variables in appropriate terms.

INQ 9: Articulate conclusions and explanations based on research data, and assess results based on the design of the investigation.

INQ 10: Communicate about science in different formats, using relevant science vocabulary, supporting evidence and clear logic.