

7th Grade Summer Assignment Rubric

	4	3	2	1
QUESTION	Student clearly defines the variables and the relationship to investigate in his/her testable question.	Writes a testable question to investigate the relationship between two variables within the context presented.	Writes a question to investigate with partial articulation of the variables.	Question is not testable.
HYPOTHESIS <i>NYS S2.1c</i>	<ul style="list-style-type: none"> ▪▪ Articulates a relevant hypothesis that describes in detail how two variables (IV and DV) are related with an accurate rationale using domain specific vocabulary. 	<ul style="list-style-type: none"> ▪▪ Articulates a relevant hypothesis that includes a rationale, identifying that there is a relationship between the two variables (IV and DV). ▪▪ Rationale does not incorporate domain specific vocabulary. 	<ul style="list-style-type: none"> ▪▪ Articulates a relevant hypothesis. Relationship between two variables is unclear. ▪▪ Rationale is unclear OR is not relevant to the hypothesis. 	<ul style="list-style-type: none"> ▪▪ Articulates a relevant hypothesis but does not specify the variables. ▪▪ Rationale is missing.
PROCEDURE <i>NYS S2.1b, S2.2d</i>	<ul style="list-style-type: none"> • Procedure tests the hypothesis and accounts for interaction of dependent, independent, and controlled variables. • Procedure has logical sequence and includes details that would yield similar results if repeated. • Includes multiple trials that increase reliability of experimental data. 	<ul style="list-style-type: none"> • Procedure tests the hypothesis and accounts for interaction of dependent, independent, and at least one controlled variable. • Procedure has logical sequence and includes details that would yield similar results if repeated. • Repeated trials are not indicated in the procedure. 	<ul style="list-style-type: none"> • Procedure tests the hypothesis but does not account completely for interaction of dependent, independent, and controlled variables. • Unclear sequence or lack of details in procedure could lead to different results if repeated. 	<ul style="list-style-type: none"> • Procedure is not relevant to the stated question. • Procedure does not address the hypothesis. • Procedure contains major omissions or errors.
DATA AND/OR OBSERVATIONS <i>NYS S3.1a</i>	<ul style="list-style-type: none"> ▪▪ Data is represented in a data table ▪▪ All units/labels are correct. ▪▪ Sample calculations with work shown when applicable. 	<ul style="list-style-type: none"> ▪▪ Data is represented in an organized data table. ▪▪ Units/labels are included. ▪▪ All graphs / diagrams are labeled accurately (titles, units.etc) 	<ul style="list-style-type: none"> ▪▪ Some data is missing OR unorganized ▪▪ Some units/labels are missing. ▪▪ Sample calculations included but work is not shown. ▪▪ 	<ul style="list-style-type: none"> ▪▪ Most data is missing ▪▪ Data representation is very unorganized ▪▪ Most or all units/labels are missing. ▪▪ Calculations missing.
DISCUSSION <i>CCSS: WHST 6-8.1b, WHST 6-8. 2d</i>	<ul style="list-style-type: none"> ▪▪ Claim is supported by at least 3 or more specific examples from the data as evidence. ▪▪ Reasoning connects the data to what we have been learning in class using domain specific vocabulary. ▪▪ Reasoning demonstrates that student clearly understands all major concepts associated with the lab and includes information not presented in class to support data. 	<ul style="list-style-type: none"> ▪▪ Claim answers the question accurately and clearly. ▪▪ Claims are supported by at least 2 specific examples from the data as evidence. ▪▪ Reasoning demonstrates that student understands major concepts associated with the lab. 	<ul style="list-style-type: none"> ▪▪ Claim does not answer the question accurately or clearly. ▪▪ Evidence to support claims is insufficient, not specific and/or not taken directly from the data. ▪▪ Reasoning demonstrates that student understands some of the concepts associated with the lab. ▪▪ 	<ul style="list-style-type: none"> ▪▪ Claims are unrelated to the question or are very confusing to the reader. ▪▪ Evidence provided does not support claims or evidence is missing altogether. ▪▪ Reasoning is missing or demonstrates that the student does not understand the concepts associated with the lab.

7th Grade Summer Assignment Rubric

<p>CONCLUSION</p> <p>CCSS: WHST 6-8. 2d, WHST 6-8. 1e</p> <p>NYS S3.2c</p>	<ul style="list-style-type: none"> ▪▪ Properly states if the hypothesis was supported by the data or not and explains why this is so. ▪▪ Answers the focus question accurately and clearly. ▪▪ Discusses how the identified sources of error could affect the outcome of the lab. ▪▪ Applies information to the real world. ▪▪ Contains new questions and reflection about the topic and/or suggestions to improve or further build upon this experiment. 	<ul style="list-style-type: none"> ▪▪ States whether the hypothesis was supported or not supported by the data. ▪▪ Identifies relevant sources of error. ▪▪ Accurately uses related/appropriate scientific vocabulary to explain what was learned during this lab. 	<ul style="list-style-type: none"> ▪▪ Hypothesis is restated but is not connected to the purpose (focus) of the lab. ▪▪ Sources of error that are discussed / identified are not relevant. ▪▪ Limited use of scientific vocabulary. 	<ul style="list-style-type: none"> ▪▪ Hypothesis is not referred to. ▪▪ No related scientific vocabulary used. ▪▪ Sources of error are missing.
---	--	---	--	--

Common Core Learning Standards:

WHST 6-8.1b Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text

WHST 6-8. 2b Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.

WHST 6-8. 1e Provide a concluding statement or section that follows from and supports the information or explanation presented.

WHST 6-8. 2a Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.

WHST 6-8. 2d Use precise language and domain-specific vocabulary to inform about or explain the topic.

NYS Science Standards:

S2.1a demonstrate appropriate safety techniques

S2.1c design and conduct an experiment to test a hypothesis

S2.2d identify independent variables, dependent variables and constants in a simple controlled experiment

S3.1a organize results using appropriate graphs, data tables and other models to show relationships

S3.2c evaluate the original hypothesis in light of the data

Scientific Practices from NGSS Framework

1. Asking Questions
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations
7. Engaging in argument from evidence
8. Communicating information