

HAWAII ALIGNMENT FOR NIH SUPPLEMENT USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY

<b>USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY</b>		
<b>Hawaii Content and Performance Standards: Biological Science – Grades 9 – 12</b>		
<b>Lesson</b>	<b>Benchmark</b>	<b>Descriptor</b>
2, 3	SC.BS.1.1	Describe how a testable hypothesis may need to be revised to guide a scientific investigation.
2, 3	SC.BS.1.2	Design and safely implement an experiment, including the appropriate use of tools and techniques to organize, analyze, and validate data.
2, 3	SC.BS.1.3	Defend and support conclusions, explanations, and arguments based on logic, scientific knowledge, and evidence from data.
3	SC.BS.1.4	Determine the connection(s) among hypotheses, scientific evidence, and conclusions.
1, 2, 3	SC.BS.1.5	Communicate the components of a scientific investigation, using appropriate techniques.
2, 3	SC.BS.1.7	Revise, as needed, conclusions and explanations based on new evidence.
1, 3, 4	SC.BS.2.1	Explain how scientific advancements and emerging technology have influenced society.
3, 4	SC.BS.2.2	Compare the risks and benefits of potential solutions to technological issues.
3	SC.BS.4.1	Describe different cell parts and their functions.
3	SC.BS.4.2	Explain how cells are specialized into different tissues and organs.
<b>Hawaii Content and Performance Standards: Mathematics – Pre-Algebra and Algebra</b>		
<b>Lesson</b>	<b>Benchmark</b>	<b>Descriptor</b>
1	MA.PA.1.3	Use ratios and proportions to represent the relationship between two quantities.
1	MA.PA.3.1	Add, subtract, multiply, and divide numbers with whole number exponents.
1, 2	MA.PA.4.3	Use ratios and proportions to solve measurement problems.
1	MA.PA.9.1	Represent a variety of patterns (including recursive patterns) with tables, graphs (including graphing technology when available), words, and when possible, symbolic rules.
1	MA.PA.10.3	Use tables and graphs to represent and compare linear relationships.
1	MA.PA.11.2	Judge the validity of data based on the data collection method.
1	MA.PA.14.1	Judge the validity of conjectures that are based on experiments or simulations.
1	MA.AI.3.2	Apply the laws of exponents to perform operations on expressions with integral exponents.
<b>Hawaii Content and Performance Standards: Language Arts – Grades 9 &amp; 10</b>		
<b>Lesson</b>	<b>Benchmark</b>	<b>Descriptor</b>
2, 3, 4	LA.9.1.1 LA.10.1.1	Use new grade-appropriate vocabulary, including content area vocabulary, learned through reading and word study.
2, 3, 4	LA.10.1.2	Independently use a variety of strategies to gain information from print and online resources, both primary and

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		secondary, as part of a research plan to support a thesis.
2, 3, 4	LA.9.2.2	Analyze questions not answered by a selected text.
3, 4	LA.9.4.1 LA.10.4.1	Write in a variety of grade-appropriate formats for a variety of purposes and audiences, such as: <ul style="list-style-type: none"> <li>• narratives or scripts with a theme and details that contribute to a mood or tone</li> <li>• literary, persuasive, and personal essays</li> <li>• research papers that state and support a thesis</li> <li>• functional writing including forms, applications, and questionnaires</li> <li>• pieces to reflect on learning and to solve problems</li> </ul>
3, 4	LA.10.4.2	Use knowledge of sentence structure, grammar, punctuation, capitalization, and spelling to produce grade-appropriate writing in standard English.
3, 4	LA.9.4.4	Use a variety of strategies and resources to spell grade-appropriate words.
3, 4	LA.9.5.1	Use accurate and useful research information in writing.
3, 4	LA.9.5.3 LA.10.5.3	Use a variety of sentence structures (e.g., parallel phrasing, subordination) and grade-appropriate vocabulary to achieve efficiency, indicate emphasis, and clarify meaning.
3, 4	LA.9.5.4	Use a voice and tone appropriate for the topic, purpose, and audience.
2, 3, 4	LA.9.6.1 LA.10.6.1	Organize and participate in a small group to accomplish a task or explore a topic. (9) Participate in a small group (e.g., plan sessions, decide on procedures, plan sessions, assign responsibilities, evaluate results). (10)
3, 4	LA.9.6.2 LA.10.6.2	Give a planned oral presentation: highlighting a main idea(s) with support (e.g., statistics, anecdotes, examples) (9); adopting a position or explaining a point of view (10).
All lessons	LA.9.6.5 LA.10.6.7	Adjust dialect (e.g., standard English, Hawaiian Creole, colloquialisms) to grade-appropriate audience, purpose, and situation.
All lessons	LA.10.7.1	Incorporate information from a range of print and online sources.
<b>Hawaii Content and Performance Standards: Health – Grades 9 – 12</b>		
<b>Lesson</b>	<b>Benchmark</b>	<b>Descriptor</b>
3	HE.9-12.1.3	Identify personal health behaviors and other factors that impact body system functions.