



Essential Outcomes Chart: What is it we expect students to learn?

<b>GRADE:</b>	9-12	<b>SUBJECT:</b>	<i>Biology</i>	<b>SEMESTER:</b>	1 & 2	<b>TEAM MEMBERS:</b>	<i>Coyne, Lor, Perez, Yamuni</i>
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STANDARD DESCRIPTION	EXAMPLE RIGOR	PREREQUISITE SKILLS	COMMON ASSESSMENT	WHEN TAUGHT?	EXTENSION STANDARDS
<p>What is the essential standard to be learned? Describe in student-friendly vocabulary.</p>	<p>What does proficient student work look like? Provide an example and/or description.</p>	<p>What prior knowledge, skills, and/or vocabulary is/are needed for a student to master this standard?</p>	<p>What assessment(s) will be used to measure student mastery?</p>	<p>When will this standard be taught?</p>	<p>What will we do when students have learned the essential standard(s)?</p>
<p>1- SEP 1, SEP 4, SEP 5, SEP 6 <b>Investigation &amp; Experimentation:</b> Students will carry out the Steps of the Scientific Method through Investigation &amp; Experimentation including: designing experiments, creating hypotheses, collecting and analyzing data, and developing conclusions based on the data.</p>	<p>Students can <b>Plan</b> &amp; <b>conduct</b> an <b>investigation</b> individually &amp; collaboratively to <b>produce</b> data to serve as the basis for evidence, and in the design: <b>decide</b> on types, <b>how much</b>, and <b>accuracy</b> of data needed to <b>produce</b> reliable measurements and <b>consider</b> limitations on the precision of the data (e.g., number of trials, time), and <b>refine</b> the <b>design</b> accordingly. Engage in trial and error.</p>	<p><b>Common Content Key Terms or Vocabulary for each standard:</b></p> <ul style="list-style-type: none"> <li>Variable: Independent &amp; Dependent</li> <li>Hypothesis</li> <li>Data</li> <li>Observation</li> </ul> <p><b>Academic Vocabulary</b></p> <ul style="list-style-type: none"> <li>Describe</li> <li>Compare</li> <li>Contrast</li> <li>Differentiate</li> <li>Explain</li> </ul> <p><b>Focused note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>CER Organizer</li> <li>CER Summary</li> </ul> <p><b>Differentiated Critical</b></p>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>Student Portfolios &amp; or Interactive Notebooks</li> <li>CER(Claim, Evidence, Reasoning)/Summary Paragraphs</li> <li>Differentiated Critical Reading</li> <li>Inquiry Labs</li> <li>Lab Reports</li> <li>Common Formative Assessments</li> <li>Common Summative Assessments,</li> </ul>	<p>Quarter 1</p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>Projects that are standard specific</li> <li>Enrichment activities</li> <li>Additional Critical Reading / literature readings related to the standard</li> <li>Virtual Labs</li> <li>Graph Analysis using <b>AVID LENSES</b></li> <li>Design a Science Experiment</li> <li><b>CER:</b> Claim Evidence &amp; Reasoning Data Analysis</li> <li><b>POGIL:</b> <i>Process-oriented guided-inquiry learning</i></li> </ul>

	<p><b>Through CER/Summary paragraphs and POGIL &amp; Inquiry Labs</b></p>	<p><b>Reading Strategies</b>  <b>Steps of the Scientific Method</b>  <b>Microscope Technique</b>  <b>Metric Measurement using a rulers, balances and glassware.</b>  <b>Conduct /Complete:</b></p> <ul style="list-style-type: none"> <li>• Simple measurement</li> <li>• Data Collection</li> <li>• Data Analysis including finding averages</li> <li>• Identify sources of error</li> <li>• Graph data using various forms of graphs</li> </ul>	<ul style="list-style-type: none"> <li>• MAP Assessment Results</li> </ul>		
<p><b>2- HS LS 1-1 Through HS LS 1-7</b>  <b>Hierarchical Organization of Interacting Systems &amp; Homeostasis:</b>          Students will explain how the various parts of the body work together to maintain homeostasis.</p> <p>Students will describe the four common characteristics shared by Living things.</p>	<p><b>Students can describe and explain:</b></p> <ul style="list-style-type: none"> <li>• The Characteristics of living things &amp; Biodiversity</li> <li>• How systems of cells, tissues, and organs function together to support the life processes in body systems.</li> </ul> <p><b>Through CER/Summary paragraphs</b></p>	<p><b>Common Content Key Terms or Vocabulary for each standard:</b></p> <ul style="list-style-type: none"> <li>• Species</li> <li>• Energy</li> <li>• Living thing Stimulus</li> <li>• Systems</li> <li>• Homeostasis</li> <li>• Positive Feedback Loops</li> <li>• Negative Feedback</li> </ul> <p><b>Academic Vocabulary</b></p> <ul style="list-style-type: none"> <li>• Describe</li> <li>• Compare</li> <li>• Contrast</li> <li>• Differentiate</li> <li>• Explain</li> <li>• Hierarchy</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>• CER Organizer</li> </ul>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>• Student Portfolios &amp; or Interactive Notebooks</li> <li>• CER/Summary Paragraphs</li> <li>• Differentiated Critical Reading</li> <li>• Common Formative Assessment</li> <li>• Common Summative Assessment</li> <li>• MAP Assessment Results</li> </ul>	<p><b>Quarter 1</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>• Projects that are standard specific</li> <li>• Enrichment activities</li> <li>• Additional Critical Reading / literature readings related to the standard</li> <li>• Virtual Labs</li> <li>• Models</li> <li>• <b>POGIL: <i>Process-oriented guided-inquiry learning</i></b></li> <li>• <b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>

		<ul style="list-style-type: none"> <li>● CER Summary</li> </ul> <b>Differentiated Critical Reading Strategies</b>			
<b>3-PS 1.A, ESS 2.C, SEP 6 , HS-LS1-2</b> <b>Introduction to Chemistry:</b> Students can identify & describe the components of atoms, ions & molecules, describe the properties of water, determine the reactants and products, and recognize a chemical reaction in equilibrium, in the context of biological processes.	<b>Students can analyze and interpret Models</b> (e.g., physical, computer models) that <b>simulate</b> systems and interactions— including energy , matter, and information flows— within and between <b>systems</b> .  <b>Through CER/Summary Paragraphs &amp; Molecular Models</b>	<b>Common content Key Terms or Vocabulary for each standard</b> <ul style="list-style-type: none"> <li>● Molecules</li> <li>● Elements</li> <li>● Compounds</li> <li>● Amino acids</li> <li>● Carbon</li> <li>● Hydrogen</li> <li>● Oxygen</li> </ul> <b>Academic Language:</b> <ul style="list-style-type: none"> <li>● Describe</li> <li>● Explain</li> <li>● Differentiate</li> <li>● Compare/Contrast</li> </ul> <b>Focused Note taking Paragraph Summaries</b> <ul style="list-style-type: none"> <li>● CER Organizer</li> <li>● CER Summary</li> </ul> <b>Differentiated Critical Reading Strategies</b> <b>Parts of an Atom</b> <b>Properties of Periodic Table</b>	<b>Informal &amp; Formal Assessments</b> <ul style="list-style-type: none"> <li>● Student Portfolios &amp; or Interactive Notebooks</li> <li>● CER/Summary Paragraphs</li> <li>● Differentiated Critical Reading</li> <li>● Inquiry Labs</li> <li>● Lab Reports</li> <li>● Common Formative Assessments</li> <li>● Common Summative Assessments,</li> <li>● MAP Assessment Results</li> </ul>	<b>Quarter 2</b>	<b>Extension Activities / HONOR'S</b> <ul style="list-style-type: none"> <li>● Projects that are standard specific</li> <li>● Enrichment activities</li> <li>● Additional Critical Reading / literature readings related to the standard</li> <li>● Virtual Labs</li> <li>● Models</li> <li>● <b>POGIL: <i>Process-oriented guided-inquiry learning</i></b></li> <li>● <b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>

<p>4- HS LS 1-6 <b>Biochemistry:</b></p> <p>Identify and describe the composition of the 4 carbon based biological molecules and how they interact in the systems of living things.</p>	<p><b>Students can</b> <b>Construct</b> and <b>revise</b> an <b>explanation based on evidence</b> for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Through</b> <b>CER/Summary Paragraphs, process activities &amp; Inquiry Labs</b></p>	<p><b>Common content Key Terms or Vocabulary for each standard</b></p> <ul style="list-style-type: none"> <li>● Molecules</li> <li>● Elements,</li> <li>● Amino acids</li> <li>● Carbon</li> <li>● Hydrogen</li> <li>● Oxygen</li> <li>● Nitrogen</li> <li>● Phosphorus</li> <li>● catalyst</li> </ul> <p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>● Model</li> <li>● Construct</li> <li>● Revise</li> <li>● Describe</li> <li>● Explain</li> <li>● Differentiate</li> <li>● Compare/Contrast</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>● CER Organizer</li> <li>● CER Summary</li> </ul> <p><b>Differentiated Critical Reading Strategies</b></p>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>● Student Portfolios &amp;/or Interactive Notebooks</li> <li>● CER/Summary Paragraphs</li> <li>● Differentiated Critical Reading</li> <li>● Inquiry Labs</li> <li>● Lab Reports</li> <li>● Common Formative Assessments</li> <li>● Common Summative Assessments,</li> <li>● MAP Assessment Results</li> </ul>	<p><b>Quarter 2</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>● Projects that are standard specific</li> <li>● Enrichment activities</li> <li>● Additional Critical Reading / literature readings related to the standard</li> <li>● Enzyme Catalyst Activity</li> <li>● Virtual Labs</li> <li>● Models</li> <li>● <b>POGIL: <i>Process-oriented guided-inquiry learning</i></b></li> <li>● <b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>
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<p>5- HS LS 1-1 Through HS LS 1-7  <b>Cell Biology:</b> Identify and describe the structure and function of organelles in plant and animals systems.</p>	<p><b>Students are able to</b> <b>investigate</b> explanations for the structure and function of cells as the basic units of life, the hierarchical systems of organisms, and the role of specialized cells for maintenance and growth.</p> <p><b>Through CER/Summary Paragraphs</b></p>	<p><b>Common Content Key Terms or Vocabulary for each standard</b></p> <ul style="list-style-type: none"> <li>• Structure</li> <li>• Function</li> </ul> <p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>• Describe</li> <li>• Explain</li> <li>• Differentiate</li> <li>• Compare/Contrast</li> <li>• Investigate</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>• CER Organizer</li> <li>• CER Summary</li> </ul> <p><b>Differentiated Critical Reading Strategies</b></p> <p><b>Microscope Technique</b></p>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>• Student Portfolios &amp; or Interactive Notebooks</li> <li>• CER/Summary Paragraphs</li> <li>• Differentiated Critical Reading</li> <li>• Inquiry Labs</li> <li>• Lab Reports</li> <li>• Common Formative Assessments</li> <li>• Common Summative Assessments,</li> <li>• MAP Assessment Results</li> </ul>	<p><b>Quarter 2</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>• Projects that are standard specific</li> <li>• Enrichment activities</li> <li>• Additional Critical Reading / literature readings related to the standard</li> <li>• Virtual Labs</li> <li>• Models</li> <li>• <b>POGIL: <i>Process-oriented guided-inquiry learning</i></b></li> <li>• <b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>
<p>6- HS LS 1-2, HS LS1-7, HS LS 2-3  <b>Cell Energy-- Photosynthesis and Respiration:</b> Model the chemical reaction of the photosynthesis process.</p>	<p><b>Students can</b> <b>describe</b> the main way that energy is cycled from solar energy, into producers, and through consumers, <b>using the components of the carbon cycle</b>, in which carbon is exchanged among the biosphere, atmosphere, oceans,</p>	<p><b>Common Key Content Terms or Vocabulary for each standard</b></p> <ul style="list-style-type: none"> <li>• Light energy</li> <li>• Chemical energy</li> <li>• Chemical process</li> <li>• Bonds</li> <li>• Compounds</li> <li>• Product</li> <li>• Reactant</li> </ul>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>• Student Portfolios &amp; or Interactive Notebooks</li> <li>• CER/Summary Paragraphs</li> <li>• Differentiated Critical Reading</li> <li>• Inquiry Labs</li> </ul>	<p><b>Quarter 2</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>• Projects that are standard specific</li> <li>• Enrichment activities</li> <li>• Additional Critical Reading / literature readings related to the standard</li> <li>• Virtual Labs</li> <li>• Models</li> </ul>

<p>Describe the process of transforming sugars into cellular energy.</p>	<p>and geosphere to maintain life on Earth, especially through cellular respiration and photosynthesis.</p> <p><b>Through CER/Summary Paragraphs</b></p>	<p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>Describe</li> <li>Explain</li> <li>Differentiate</li> <li>Compare/Contrast</li> <li>Construct</li> <li>Model</li> <li>Replicate</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>CER Organizer</li> <li>CER Summary</li> </ul> <p><b>Differentiated Critical Reading Strategies</b></p>	<ul style="list-style-type: none"> <li>Lab Reports</li> <li>Common Formative Assessments</li> <li>Common Summative Assessments, MAP Assessment Results</li> </ul>		<ul style="list-style-type: none"> <li><b>POGIL: Process-oriented guided-inquiry learning</b></li> <li><b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>
<p>7- HS-LS1-4, HS LS 3-1, LS 1.A, LS 1.B, LS 3.A &amp; LS 3.B</p> <p><b>Molecular Biology</b></p> <p>Model the process of cell division in maintaining and reproducing organisms, including the process of protein synthesis.</p>	<p><b>Students can construct</b> a model to illustrate the life cycle of a cell, including explanations based on evidence of how the structure of DNA determines the structure of proteins which carry out essential functions of life, and including role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p><b>Through CER/Summary Paragraphs</b></p>	<p><b>Common Content Key Terms or Vocabulary for each standard</b></p> <ul style="list-style-type: none"> <li>Synthesis</li> <li>Decomposition</li> <li>Chemical reaction</li> <li>Differentiation</li> </ul> <p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>Describe</li> <li>Explain</li> <li>Differentiate</li> <li>Compare/Contrast</li> <li>Construct</li> <li>Determine</li> <li>Illustrate</li> <li>Model</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>CER Organizer</li> <li>CER Summary</li> </ul> <p><b>Differentiated Critical Reading Strategies</b></p>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>Student Portfolios &amp; or Interactive Notebooks</li> <li>CER/Summary Paragraphs</li> <li>Differentiated Critical Reading</li> <li>Inquiry Labs</li> <li>Lab Reports</li> <li>Common Formative Assessments</li> <li>Common Summative Assessments, MAP Assessment Results</li> </ul>	<p><b>Quarter 3</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>Projects that are standard specific</li> <li>Enrichment activities</li> <li>Additional Critical Reading / literature readings related to the standard</li> <li>Virtual Labs</li> <li>Biotechnology Inquiry Labs</li> <li><b>POGIL: Process-oriented guided-inquiry learning</b></li> <li><b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>
<p><b>OPTION: Time Permitting- HONORS Expectation</b></p> <p>ETS 1-3</p>	<p><b>Students can engage</b> in argument from Evidence using Philosophical Chairs and CER.</p>	<p><b>Common Content Key Terms or Vocabulary for each standard</b></p> <ul style="list-style-type: none"> <li>Controversial</li> <li>Debate</li> </ul>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>Student Portfolios &amp; or Interactive</li> </ul>	<p><b>Quarter 3</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>Projects that are standard specific</li> <li>Enrichment activities</li> </ul>

<p><b>Stem Cell Debate</b> Inquire about and address the pros and cons of a controversial topic</p>		<p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>Describe</li> <li>Explain</li> <li>Differentiate</li> <li>Compare/Contrast</li> <li>Engage</li> <li>Inquire</li> <li>Address</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>CER Organizer</li> <li>CER Summary</li> </ul> <p><b>Differentiated Critical Reading Strategies</b></p>	<p>Notebooks</p> <ul style="list-style-type: none"> <li>CER/Summary Paragraphs</li> <li>Differentiated Critical Reading</li> <li>Inquiry Labs</li> <li>Lab Reports</li> <li>Common Formative Assessments</li> <li>Common Summative Assessments,</li> <li>MAP Assessment Results</li> </ul>		<ul style="list-style-type: none"> <li>Additional Critical Reading / literature readings related to the standard</li> <li>Virtual Labs</li> <li>Socratic Seminars</li> <li>AVID Graphic Organizers: <b>NEWS, DDDE, Read &amp; Recall</b></li> <li><b>POGIL: <i>Process-oriented guided-inquiry learning</i></b></li> <li><b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>
<p><b>8- HS-LS-3-1, 3-2 &amp; 3-3</b> <b>Inheritance &amp; Variation of Traits</b> Explain how monohybrid and dihybrid traits are passed from parents to offspring and create and analyze pedigree charts</p>	<p><b>Students can explain</b> the mechanisms of genetic inheritance and <b>describe</b> the environmental and genetic causes of gene mutation and the alteration of gene expression.</p> <p><b>Through CER/Summary Paragraphs</b></p>	<p><b>Common Content Key Terms or Vocabulary for each standard</b></p> <ul style="list-style-type: none"> <li>Characteristic</li> <li>Traits</li> <li>Replication</li> <li>Environmental factors</li> <li>Viable errors</li> </ul> <p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>Describe</li> <li>Explain</li> <li>Differentiate</li> <li>Compare/Contrast</li> <li>Determine</li> <li>Develop</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>CER Organizer</li> <li>CER Summary</li> </ul> <p><b>Differentiated Critical Reading Strategies</b></p>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>Student Portfolios &amp; or Interactive Notebooks</li> <li>Summary Paragraphs,</li> <li>Inquiry Labs</li> <li>Lab Reports</li> <li>Common Formative Assessments</li> <li>Common Summative Assessments,</li> <li>MAP Assessment Results</li> </ul>	<p><b>Quarter 3</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>Projects that are standard specific</li> <li>Enrichment activities</li> <li>Additional Critical Reading / literature readings related to the standard</li> <li>Virtual Labs</li> <li>MAP Distance Activity</li> <li>CHI Square Analysis</li> <li><b>POGIL: <i>Process-oriented guided-inquiry learning</i></b></li> <li><b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>
<p><b>9- HS-LS1-2.</b></p>	<p><b>Students can model</b> and <b>analyze</b> theory of plate tectonics and</p>	<p><b>Common Content Key Terms or Vocabulary for each standard</b></p>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>Student</li> </ul>	<p><b>Quarter 4</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>Projects that are</li> </ul>

<p><b>History of Earth's Atmosphere &amp; Biosphere</b> Explain how the plates/structure of the Earth have changed over time.</p> <p>Explain how living things are classified phylogenetically.</p>	<p>continental drift as it relates the evolution of the atmosphere and biosphere of planet Earth. Students can <b>classify</b> organisms using a dichotomous key. Students can <b>construct</b> and <b>analyze</b> a cladogram.</p> <p><b>Through CER/Summary Paragraphs</b></p>	<ul style="list-style-type: none"> <li>Limited resources</li> <li>Environment</li> <li>Human activity</li> </ul> <p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>Describe</li> <li>Explain</li> <li>Differentiate</li> <li>Compare/Contrast</li> <li>Develop</li> <li>Illustrate</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>CER Organizer</li> <li>CER Summary</li> </ul> <p><b>Differentiated Critical Reading Strategies</b></p>	<p>Portfolios &amp; or Interactive Notebooks</p> <ul style="list-style-type: none"> <li>CER/Summary Paragraphs</li> <li>Differentiated Critical Reading</li> <li>Inquiry Labs</li> <li>Lab Reports</li> <li>Common Formative Assessments</li> <li>Common Summative Assessments,</li> <li>MAP Assessment Results</li> </ul>		<p>standard specific</p> <ul style="list-style-type: none"> <li>Enrichment activities</li> <li>Additional Critical Reading / literature readings related to the standard</li> <li>Virtual Labs</li> <li>AP Extension activities</li> <li><b>POGIL: <i>Process-oriented guided-inquiry learning</i></b></li> <li><b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>
<p><b>10- HS-LS-4-1 through 4-6 &amp; HS-LS-3-3 Biological Evolution: Unity &amp; Diversity.</b></p> <p>Describe how all living things are related and how they have changed over time.</p>	<p>Students can <b>Model</b> the relationships that exist between different species and <b>illustrate</b> how the development of different adaptations has led to increased speciation.</p> <p><b>Through CER/Summary Paragraphs</b></p>	<p><b>Common Content Key Terms or Vocabulary for each standard,</b></p> <ul style="list-style-type: none"> <li>Limited resources</li> <li>Environment</li> <li>Human activity,</li> </ul> <p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>Describe</li> <li>Explain</li> <li>Differentiate</li> <li>Compare/Contrast</li> <li>Model</li> <li>Illustrate</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>CER Organizer</li> <li>CER Summary</li> </ul> <p><b>Differentiated Critical Reading Strategies</b></p>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>Student Portfolios &amp; or Interactive Notebooks</li> <li>CER/Summary Paragraphs</li> <li>Differentiated Critical Reading</li> <li>Inquiry Labs</li> <li>Lab Reports</li> <li>Common Formative Assessments</li> <li>Common Summative Assessments,</li> <li>MAP Assessment Results</li> </ul>	<p><b>Quarter 4</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>Projects that are standard specific</li> <li>Enrichment activities</li> <li>Additional Critical Reading / literature readings related to the standard</li> <li>Virtual Labs</li> <li><b>POGIL: <i>Process-oriented guided-inquiry learning</i></b></li> <li><b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>
<p><b>11-</b></p>	<p>Students can <b>demonstrate</b> an ability to <b>investigate</b> the role of</p>	<p><b>Common Key Terms or Vocabulary for each standard</b></p>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>Student</li> </ul>	<p><b>Quarter 4</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>Projects that are</li> </ul>



<p>HS LS 2-1 Through HS LS 2-8 &amp; HS LS-4-6 LS 2.A through LS 2-D &amp; LS 4.D <b>Ecology &amp; Biodiversity:</b> Explain interactions and the movement of energy between organisms and the environment.</p>	<p><b>biodiversity in ecosystems</b> and the role of <b>animal behavior</b> on survival of individuals and species. Students can <b>model</b> of interactions among organisms and how those interactions influence the <b>dynamics of ecosystems</b>.</p> <p>Students can <b>evaluate</b> and <b>adapt</b> existing <b>renewable and nonrenewable resources as they relate to ecological sustainability</b> through a research project and presentation.</p> <p><b>Through CER/Summary Paragraphs</b></p>	<ul style="list-style-type: none"> <li>Resources</li> <li>Climate</li> <li>Cycles of matter</li> <li>Energy</li> <li>Nitrogen</li> <li>Atmosphere</li> <li>Hydrosphere</li> <li>Geosphere</li> <li>Physical change</li> </ul> <p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>Describe</li> <li>Explain</li> <li>Differentiate</li> <li>Compare/Contrast</li> <li>Demonstrate</li> <li>Investigate</li> </ul> <p><b>Focused Note taking Paragraph Summaries</b></p> <ul style="list-style-type: none"> <li>CER Organizer</li> <li>CER Summary</li> </ul> <p><b>Differentiated Critical Reading Strategies</b></p>	<p>Portfolios &amp; or Interactive Notebooks</p> <ul style="list-style-type: none"> <li>CER/Summary Paragraphs</li> <li>Differentiated Critical Reading</li> <li>Inquiry Labs</li> <li>Lab Reports</li> <li>Common Formative Assessments</li> <li>Common Summative Assessments,</li> <li>MAP Assessment Results</li> </ul>		<p>standard specific</p> <ul style="list-style-type: none"> <li>Enrichment activities</li> <li>Additional Critical Reading / literature readings related to the standard</li> <li>Virtual Labs</li> <li>Models</li> <li><b>POGIL: Process-oriented guided-inquiry learning</b></li> <li><b>CER: Claim Evidence &amp; Reasoning Data Analysis</b></li> </ul>
<p><b>12-HS-LS1-1 Microbiology &amp; Biotechnology HONOR'S</b> The genetic composition of cells can be altered by incorporation of exogenous DNA into the cells.</p>	<p>Students can <b>investigate</b> transformation of bacteria techniques, <b>calculate</b> transformation efficiency, <b>model</b> recombinant DNA and <b>perform</b> DNA Fingerprinting Analysis using Gel Electrophoresis Gels.</p> <p><b>Through CER/Summary Paragraphs</b></p>	<p><b>Common Content Key Terms or Vocabulary for each standard</b></p> <ul style="list-style-type: none"> <li>Pathogens</li> <li>Bacteria</li> <li>Colonies</li> <li>DNA</li> <li>Fingerprinting</li> </ul> <p><b>Academic Language</b></p> <ul style="list-style-type: none"> <li>Describe</li> <li>Explain</li> <li>Differentiate</li> <li>Compare/Contrast</li> <li>Model</li> <li>Perform</li> <li>Investigate</li> <li>Analyze</li> </ul>	<p><b>Informal &amp; Formal Assessments</b></p> <ul style="list-style-type: none"> <li>Student Portfolios &amp; or Interactive Notebooks</li> <li>CER/Summary Paragraphs</li> <li>Differentiated Critical Reading</li> <li>Inquiry Labs</li> <li>Lab Reports</li> <li>Common Formative Assessments</li> <li>Common Summative Assessments,</li> </ul>	<p><b>Quarter 4</b></p>	<p><b>Extension Activities / HONOR'S</b></p> <ul style="list-style-type: none"> <li>Projects that are standard specific</li> <li>Enrichment activities</li> <li>Additional Critical Reading / literature readings related to the standard</li> <li>Virtual Labs</li> <li>Biotechnology Inquiry Labs</li> <li>More Gel Electrophoresis Activities</li> <li>DNA Fragment Maps</li> <li><b>POGIL: Process-oriented guided-inquiry learning</b></li> </ul>

		<b>Focused Note taking Paragraph Summaries</b> <ul style="list-style-type: none"> <li>● CER Organizer</li> <li>● CER Summary</li> </ul> <b>Differentiated Critical Reading Strategies</b>	<ul style="list-style-type: none"> <li>● MAP Assessment Results</li> </ul>		<ul style="list-style-type: none"> <li>● <b>CER:</b> Claim Evidence &amp; Reasoning Data Analysis</li> </ul>
RST .11-12.1 WHST .9-12.2 (HS-LS1-1) <b>Cite specific textual evidence</b> to support analysis of science and technical texts and annotating distinctions that the author makes and to any gaps or inconsistencies data.	<b>Students can Write</b> informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.  <b>Through CER/Summary Paragraphs</b>	<b>Academic Language</b> <ul style="list-style-type: none"> <li>● Describe</li> <li>● Explain</li> <li>● Differentiate</li> <li>● Compare/Contrast</li> <li>● Marking text</li> <li>● Charting text</li> <li>● Interacting with text</li> <li>● Annotating text</li> </ul> <b>Focused Note taking Paragraph Summaries</b> <ul style="list-style-type: none"> <li>● CER Organizer</li> <li>● CER Summary</li> </ul> <b>Differentiated Critical Reading Strategies</b>	<b>Informal &amp; Formal Assessments</b> <ul style="list-style-type: none"> <li>● Student Portfolios &amp; or Interactive Notebooks</li> <li>● CER/Summary Paragraphs</li> <li>● Differentiated Critical Reading</li> <li>● Inquiry Labs</li> <li>● Lab Reports</li> <li>● Common Formative Assessments</li> <li>● Common Summative Assessments,</li> <li>● MAP Assessment Results</li> </ul>	<b>Quarters 1-4</b>	<b>Extension Activities / HONOR'S</b> <ul style="list-style-type: none"> <li>● Projects that are standard specific</li> <li>● Enrichment activities</li> <li>● Additional literature readings related to the standard</li> <li>● Online / Digital Critical Readings-- Marking and Charting Text and Rhetorical Precis.</li> <li>● <b>POGIL: <i>Process-oriented guided-inquiry learning</i></b></li> <li>● <b>CER:</b> Claim Evidence &amp; Reasoning Data Analysis</li> </ul>