

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p><b>Unit 5-</b> The Periodic Table</p> <p>Week 1- Organizing the elements.</p>	<p><b>Key summary</b></p> <p><b>HS-ICP1-1.</b> Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p> <p><b>HS-ICP1-3.</b> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</p>	<p><b><u>Phenomenon</u></b> What are periodic trends and why are they important?</p> <p><b><u>Activities</u></b> Element Poster Vocabulary</p> <p><b><u>DCI (Disciplinary Core Ideas)</u></b> PS1.A: Structure and Properties of Matter</p> <p><b><u>SEPS (Science and Engineering Practices)</u></b> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><b><u>CCC (Crosscutting Concepts)</u></b> CC.1: Patterns CC 6. Structure and Function CC 4. Systems and System Models CC 7. Stability and Change</p>	<ul style="list-style-type: none"> <li>• Periodic Table</li> </ul>	<p>Element Poster Evaluation</p>

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<p><b>Unit 5-</b> The Periodic Table</p> <p>Week 2 The Modern Periodic Table</p>	<p><b>Key summary</b></p> <p><b>HS-ICP1-1.</b> Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p> <p><b>HS-ICP1-3.</b> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</p>	<p><b><u>Phenomenon</u></b> How is the modern periodic table organized?</p> <p><b><u>Activities</u></b> Notes Webquest - Scientific Method Groups of the periodic table slide report</p> <p><b><u>DCI (Disciplinary Core Ideas)</u></b> PS1.A: Structure and Properties of Matter</p> <p><b><u>SEPS (Science and Engineering Practices)</u></b> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><b><u>CCC (Crosscutting Concepts)</u></b> CC.1: Patterns CC.5: Energy and Matter CC 6. Structure and Function CC 4. Systems and System Models CC 7. Stability and Change</p>	<ul style="list-style-type: none"> <li>● Period</li> <li>● Group</li> <li>● Periodic law</li> <li>● Atomic mass unit</li> <li>● Metals</li> <li>● Transition metals</li> <li>● Nonmetals</li> <li>● metalloids</li> </ul>	<p>Section Assessment Questions in the book.</p> <p>Guided Reading Worksheets</p> <p>Slide report evaluation</p>

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<p><b>Unit 5-</b> The Periodic Table</p> <p>Week 3- Representative Groups</p>	<p><b>Key summary</b></p> <p><b>HS-ICP1-1.</b> Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p> <p><b>HS-ICP1-3.</b> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</p>	<p><b><u>Phenomenon</u></b> Why do elements in a group have similar properties?</p> <p><b><u>Activities</u></b> Notes Video Review</p> <p><b><u>DCI (Disciplinary Core Ideas)</u></b> PS1.A: Structure and Properties of Matter</p> <p><b><u>SEPS (Science and Engineering Practices)</u></b> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><b><u>CCC (Crosscutting Concepts)</u></b> CC.1: Patterns CC.5: Energy and Matter CC 6. Structure and Function CC 4. Systems and System Models CC 7. Stability and Change</p>	<ul style="list-style-type: none"> <li>● Valence electron</li> <li>● Alkali metal</li> <li>● Alkaline earth metal</li> <li>● Halogens</li> <li>● Noble gasses</li> </ul>	<p>Section Assessment Questions in the book.</p> <p>Guided Reading Worksheets</p> <p>Chapter review</p> <p>Unit 5 Test</p>

STATE STANDARDS [ICP]

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<p><b>Unit 6-</b> Chemical Bonds</p> <p>Week 4- Ionic Bonding and Covalent Bonding</p>	<p><b>Key summary</b></p> <p><b>HS-ICP1-2.</b> Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.</p> <p><b>HS-ICP1-3.</b> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</p>	<p><b><u>Phenomenon</u></b> What is one way in which elements can achieve stable electron configurations?</p> <p><b><u>Activities</u></b> Vocabulary Paper Clip Lab Notes</p> <p><b><u>DCI (Disciplinary Core Ideas)</u></b> PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions</p> <p><b><u>SEPS (Science and Engineering Practices)</u></b> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><b><u>CCC (Crosscutting Concepts)</u></b> CC.1: Patterns CC.5: Energy and Matter CC 6. Structure and Function CC 4. Systems and System Models CC 7. Stability and Change</p>	<ul style="list-style-type: none"> <li>● Electron dot diagram</li> <li>● Ion</li> <li>● Anion</li> <li>● Cation</li> <li>● Chemical bond</li> <li>● Ionic bond</li> <li>● Chemical formula</li> <li>● Crystals</li> <li>● Covalent bond</li> <li>● Molecule</li> <li>● Polar covalent bond</li> </ul>	<p>Lab Report</p> <p>Section Assessment Questions in the book.</p> <p>Guided Reading Worksheets</p>

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<p><b>Unit 6-</b> Chemical Bonds</p> <p>Week 5- Naming compounds and writing formulas</p>	<p><b>Key summary</b></p> <p><b>HS-ICP1-2.</b> Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.</p> <p><b>HS-ICP1-3.</b> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</p>	<p><b><u>Phenomenon</u></b> What information do the name and formula of an ionic or molecular formula provide?</p> <p><b><u>Activities</u></b> Notes Lab WebQuest</p> <p><b><u>DCI (Disciplinary Core Ideas)</u></b> PS1.A: Structure and Properties of Matter</p> <p><b><u>SEPS (Science and Engineering Practices)</u></b> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><b><u>CCC (Crosscutting Concepts)</u></b> CC.1: Patterns CC.5: Energy and Matter CC 6. Structure and Function CC 4. Systems and System Models CC 7. Stability and Change</p>	<ul style="list-style-type: none"> <li>● Polyatomic ion</li> <li>● Metallic bond</li> <li>● Alloy</li> </ul>	<p>Section Assessment Questions in the book.</p> <p>Guided Reading Worksheets</p> <p>Lab Report</p>

STATE STANDARDS [ICP]

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<p><b>Unit 6-</b> Chemical Bonds</p> <p>Week 6- Chemical Bonds Review and test.</p> <p>Short week- Thanksgiving break</p>	<p><b>Key summary</b></p> <p><b>HS-ICP1-2.</b> Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.</p> <p><b>HS-ICP1-3.</b> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</p>	<p><b><u>Phenomenon</u></b> Electrons are the glue that holds matter together.</p> <p><b><u>Activities</u></b> Review</p> <p><b><u>DCI (Disciplinary Core Ideas)</u></b> PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions</p> <p><b><u>SEPS (Science and Engineering Practices)</u></b> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><b><u>CCC (Crosscutting Concepts)</u></b> CC.1: Patterns CC.5: Energy and Matter CC 6. Structure and Function CC 4. Systems and System Models CC 7. Stability and Change</p>		<p>Chapter review</p> <p>Unit 6 Test</p>

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<p><b>Unit 7- Chemical Reactions</b></p> <p>Week 7- Describing Reactions and Types of Reactions</p>	<p><b>Key summary</b></p> <p><b>HS-ICP1-2.</b> Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.</p> <p><b>HS-ICP1-3.</b> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</p> <p><b>HS-ICP1-4.</b> Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.</p>	<p><b><u>Phenomenon</u></b> Matter is neither created nor destroyed in chemical reactions so mass is conserved.</p> <p><b><u>Activities</u></b> Chemical Reactions WebQuest Notes Chemical Reactions Lab Bill Nye</p> <p><b><u>DCI (Disciplinary Core Ideas)</u></b> PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions</p> <p><b><u>SEPS (Science and Engineering Practices)</u></b> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><b><u>CCC (Crosscutting Concepts)</u></b> CC.1: Patterns CC.5: Energy and Matter CC 6. Structure and Function CC 4. Systems and System Models CC 7. Stability and Change</p>	<ul style="list-style-type: none"> <li>● Reactants</li> <li>● Products</li> <li>● Chemical equation</li> <li>● Coefficients</li> <li>● Mole</li> <li>● Molar mass</li> <li>● Synthesis reaction</li> <li>● Decomposition reaction</li> <li>● Single replacement reaction</li> <li>● Double replacement reaction</li> <li>● Combustion reaction</li> <li>● Oxidation - reduction reaction</li> </ul>	<p>WebQuest Evaluation</p> <p>Section Assessment Questions in the book.</p> <p>Guided Reading Worksheets</p> <p>Lab Report</p>

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<p><b>Unit 7- Chemical Reactions</b></p> <p>Week 8- Energy changes in reactions and reaction rates</p>	<p><b>Key summary</b></p> <p><b>HS-ICP1-2.</b> Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.</p> <p><b>HS-ICP1-3.</b> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</p> <p><b>HS-ICP1-4.</b> Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.</p>	<p><b><u>Phenomenon</u></b> What happens to chemical bonds and energy during a chemical reaction?</p> <p><b><u>Activities</u></b> Notes Review</p> <p><b><u>DCI (Disciplinary Core Ideas)</u></b> PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions</p> <p><b><u>SEPS (Science and Engineering Practices)</u></b> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><b><u>CCC (Crosscutting Concepts)</u></b> CC.1: Patterns CC.5: Energy and Matter CC 6. Structure and Function CC 4. Systems and System Models CC 7. Stability and Change</p>	<ul style="list-style-type: none"> <li>● Chemical energy</li> <li>● Exothermic reaction</li> <li>● Endothermic reaction</li> <li>● Reaction rate</li> <li>● catalyst</li> </ul>	<p>Section Assessment Questions in the book.</p> <p>Guided Reading Worksheets</p> <p>Chapter review</p> <p>Unit 7 Test</p>



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<p><b>Final Review and test</b></p> <p>Week 9 - All topics covered in Q1 and Q2</p>	<p><b>Key summary</b></p> <p><b>HS-ICP1-1.</b> Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p> <p><b>HS-ICP1-2.</b> Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.</p> <p><b>HS-ICP1-3.</b> Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.</p> <p><b>HS-ICP1-4.</b> Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.</p>	<p><b><u>Phenomenon</u></b> Scientific Knowledge builds on the work of scientists who came before us.</p> <p><b><u>Activities</u></b> Review over the entire semester.</p> <p><b><u>DCI (Disciplinary Core Ideas)</u></b> PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions</p> <p><b><u>SEPS (Science and Engineering Practices)</u></b> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><b><u>CCC (Crosscutting Concepts)</u></b> CC.1: Patterns CC.5: Energy and Matter CC 6. Structure and Function CC 4. Systems and System Models CC 7. Stability and Change</p>	<ul style="list-style-type: none"> <li>All Vocab from Q1 and Q2</li> </ul>	<p>Review questions</p> <p>Semester 1 Final Exam</p>