

Cameron R-1 Scope and Sequence College Chemistry

Quarter 1				
Weeks	3 Weeks		3 Weeks	
Name of Unit	Unit 1 Introduction to Chemistry		Unit 2 Atomic Theory	
Priority Standards	<p style="text-align: center;">PS1.A.1</p> <p>Use the organization of the periodic table to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p> <p style="text-align: center;">PS1.A.3</p> <p>Plan and conduct an investigation to gather evidence to compare physical and chemical properties of substances such as melting point, boiling point, vapor pressure, surface tension, and chemical reactivity to infer the relative strength of attractive forces between particles.</p>		<p style="text-align: center;">PS1.A.1</p> <p>Use the organization of the periodic table to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p>	
Supporting Standards	<p style="text-align: center;">PS1.A.2</p> <p>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 style="text-align: center;">NQ.B</p> <p>Use units of measure as a way to understand and solve problems involving quantities. Identify, label and use appropriate units of measure within a problem. Convert units and rates. Use units within problems.</p>		<p style="text-align: center;">PS1.A.2</p> <p>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 style="text-align: center;">PS1.A.2</p> <p>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 style="text-align: center;">PS4.A.1</p> <p>Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media</p>	

Key: Priority Standard Supporting Standard

Quarter 2

Weeks	3 Weeks	3 Weeks	3 Weeks
Name of Unit	Unit 4 Periodic Table	Unit 5 Chemical Bonding	Unit 6 Molecular Geometry
Priority Standards	<p>PS1.A.1</p> <p>Use the organization of the periodic table to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p>	<p>PS1.A.2</p> <p>Demonstrate how particle behavior affects chemical bonding.</p>	<p>PS1.A.1</p> <p>Use the organization of the periodic table to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p> <p>PS1.A.2</p> <p>Demonstrate how particle behavior affects chemical bonding</p>
Supporting Standards	<p>PS1.A.3</p> <p>Use the organization of the periodic table to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p>	<p>PS1.A.4</p> <p>Apply the concepts of bonding and crystalline/molecular structure to explain the macroscopic properties of various categories of structural materials (i.e., metals, ionic (ceramics), and polymers).</p>	

Key: Priority Standard Supporting Standard

Quarter 3				Quarter 4		
Weeks	3 Weeks	3 Weeks	3 Weeks	3 Week	3 Weeks	3 Weeks
Name of Unit	Unit 7 Kinetic Molecular Theory	Unit 8 Chemical Reactions and Stoichiometry	Unit 9 Acids,Bases, and Solutions	Unit 10 Energy and Thermodynamics	Unit 11 Gas Laws	Unit 12 Redox
Priority Standards	<p>PS3.A.2</p> <p>Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).</p>	<p>PS1.A.4</p> <p>Apply the concepts of bonding and crystalline/molecular structure to explain the macroscopic properties of various categories of structural materials (i.e., metals, ionic (ceramics), and polymers).</p> <p>PS1.A.5</p> <p>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>PS1.B.3</p> <p>Use symbolic representations and mathematical calculations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.</p>	<p>PS1.A.2</p> <p>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>PS3.B.1</p> <p>Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).</p>	<p>PS1.A.2</p> <p>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>PS1.A.2</p> <p>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>

Supporting Standards	<p>PS1.A.3</p> <p>Plan and conduct an investigation to gather evidence to compare physical and chemical properties of substances such as melting point, boiling point, vapor pressure, surface tension, and chemical reactivity to infer the relative strength of attractive forces between particles.</p>	<p>PS1.A.2</p> <p>Demonstrate how particle behavior affects chemical bonding.</p>	<p>PS1.B.3</p> <p>Create a computational model to calculate the change in the energy of one component in a system when the changes in energy are known.</p>	<p>PS3.B.1</p> <p>Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).</p>	<p>PS1.A.3</p> <p>Plan and conduct an investigation to gather evidence to compare physical and chemical properties of substances such as melting point, boiling point, vapor pressure, surface tension, and chemical reactivity to infer the relative strength of attractive forces between particles.</p>	<p>PS1.A.1</p> <p>Use the organization of the periodic table to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.</p>
----------------------	---	--	--	--	---	---

Key: **Priority Standard** **Supporting Standard**