

Chemistry - Chemical Bonding

Time Frame: 12 days	Unit Title: Chemical Bonding	Course Name: Chemistry
Stage 1: Desired Results		
Established Goal(s)	Transferable Skills	
<p>NGSS Standards Addressed:</p> <p>HS-PS1-1 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>HS-PS1-2 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><i>Students will be able to independently use their learning to...</i></p> <p>Use data to make predictions.</p>	
	Meaning	
	<p><u>Understandings</u></p> <p><i>Students will understand that..</i></p> <ul style="list-style-type: none"> ★ Bond type may be predicted based on the elements involved ★ How to write the formula and name for chemical compounds. ★ Differences in electronegativity help distinguish polar and nonpolar covalent bonds. ★ Shapes of molecular compounds are determined by the location of paired and unpaired electrons 	<p><u>Essential Questions</u></p> <ul style="list-style-type: none"> ★ How does salt water conduct electricity? ★ Why are CH₄ and CO₂ greenhouse gases and N₂ and O₂ are not?
	Acquisition	
<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ★ How ionic, covalent, and metallic bonds are formed. ★ Chemical compounds are in fixed proportions ★ The IUPAC system for naming compounds. ★ The symmetry of covalent compounds. ★ How to depict Lewis Structures ★ The differences between polar and nonpolar molecules 	<p><i>Students will be able to...</i></p> <ul style="list-style-type: none"> ★ Name chemical compounds ★ Write chemical formulas ★ Explain bond types ★ Draw Lewis Dot diagrams ★ Determine if a bond is polar or nonpolar ★ Predict the shapes of molecules 	