

# Chemistry Lesson Plan

<b>Topic</b>	Energy Changes in Chemical Reactions
<b>Lesson Title</b>	Bond Energy and the Types of Reactions
<b>Lesson Number</b>	5-1c
<b>Next Generation Science Standards:</b>	<ul style="list-style-type: none"> <li>• <b>HS-PS1-4.</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.</li> <li>• <b>HS-PS1-5.</b> Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.</li> <li>• <b>HS-PS1-6.</b> Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium</li> </ul>
<b>Learning objectives:</b>	<ul style="list-style-type: none"> <li>• Identify with justification endothermic and exothermic reactions</li> </ul>
<b>"I can" statement:</b>	<ul style="list-style-type: none"> <li>• I can identify both endothermic and exothermic reactions and give a reason for my choice.</li> </ul>
<b>Prior Knowledge:</b>	
<ul style="list-style-type: none"> <li>• Chemical equations</li> <li>• Reactants and products</li> <li>• Types of reactions</li> <li>• Chemical bonding</li> </ul>	
<b>Vocabulary:</b>	
Balance of energy, bond energy, bond length, bond order, chemical potential energy, endothermic reaction, exothermic reaction, temperature, Thermal (heat) energy, thermochemistry	
<b>Summary of Activities:</b>	
<ol style="list-style-type: none"> <li>1. Distribute and complete bell ringer activity.</li> <li>2. Discuss guided notes and slideshow, with students.</li> <li>3. Vocabulary worksheet or doodle notes</li> <li>4. Exit quiz</li> </ol>	
<b>Additional Resources:</b>	
<ul style="list-style-type: none"> <li>• Endothermic and exothermic reactions– YouTube clip</li> </ul>	
<b>Homework:</b>	
Homework task	
<b>Assessment:</b>	
<ul style="list-style-type: none"> <li>• Bell work</li> <li>• Assignment/Lab project</li> <li>• Exit quiz</li> <li>• End of unit review</li> </ul>	