

Chemistry Lesson Plan

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