Chemistry Lesson Plan

Topic	Energy Changes in Chemistry
Lesson Title	Bond Energy and Types of Reactions
Lesson Number	5-1a
Next Generation Science Standards:	• ***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:	• Identify the energy changes that occur in a chemical reaction. • List the factors which affect the strength of a bond
"I can" statement:	• I can identify the energy changes that occur in a chemical reaction • I can list the factors which affect the strength of a bond

Prior Knowledge:

- Reactants and products
- Bond breaking and formation

Vocabulary:

Balance of energy, bond energy, bond length, bond order, chemical potential energy, temperature, Thermal (heat) energy, thermochemistry

Summary of Activities:

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:

- The Relationship between bond energy, bond strength and bond length – YouTube clip

Homework:

Homework task

Assessment:

- Bell work
- Assignment/Lab project
- Exit quiz
- End of unit review