Chapter 3

Energy

Unit Objectives

1. I will be able to explain the different forms of energy and why each form is important
2. I will be able to identify and explain how energy causes change
3. I will be able to understand and elaborate on the similarities and differences between kinetic and potential energy
4. I will be able to elaborate on chemical energy and explain why it is a form of potential energy
5. I will be able to identify how energy can be converted from one form to another
6. I will be able to explain the law of conservation of energy
7. I will be able to identify and explain which energy conversions are inefficient and why
8. I will be able to elaborate on which types of technology can improve energy conversions and why that technology works
9. I will be able to identify the advantages and disadvantages of different types of energy conversions
10. I will be able to explain how technology can improve the use of natural resources
11. I will be able to determine how the laws of conservation of mass and energy apply to matter as it changes form
12. I will be able to calculate different amounts of energy in different forms by measuring their defining characteristics
13. I will be able to develop and justify a scientific explanation regarding the potential and kinetic nature of mechanical energy
14. I will be able to explain what happens when energy changes form
15. I will be able to articulate how energy is neither created or destroyed but rather some energy is lost during reactions as heat energy

Vocabulary

Energy:

Mechanical Energy:

Sound Energy:

Chemical Energy:

Thermal Energy:

Electromagnetic Energy:

Nuclear Energy:

Kinetic Energy:

Potential Energy:

Law of Conservation of Energy:

Energy Efficiency:

Solar Cells: