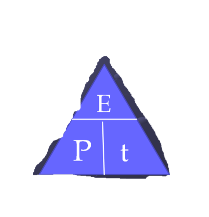
Energy Transformations Study Guide

**Chapter Five:**

* What is energy?
  + kinetic
  + potential
* Forms of energy
  + solar
  + thermal
  + wind
  + geothermal
  + chemical
  + nuclear
* Energy conversions
  + Input
  + Converter
  + Output
* Law of Conservation of Energy

**Chapter Six:**

* Generating electric energy
  + Faraday’s law of induction
  + Generator
* Coal fired thermo-electric generation
* Electric energy from water
* Solar cells
* Energy from splitting atoms
  + Nuclear fission
* Calculating power
* Calculating efficiency

**Percent Efficiency = useful energy output x 100**

**total electric energy input**

**Chapter Seven:**

* Natures energy conversions
  + Photosynthesis
    - Chlorophyll
    - chloroplasts
  + Cellular respiration
  + Input, converter, and output for each
* Ecological pyramid
  + Amount of energy passed on
* Homeostasis
  + When it’s hot
  + When it’s cold
* Sources of energy
  + Carbohydrates
    - Simple
    - Complex
    - Glycogen
  + Fats
    - Saturated
    - unsaturated
  + Proteins
* Metabolic needs
  + How do they change through life?

**Chapter Eight**

* How coal developed
  + Lack of oxygen
  + Peat, lignite, sub-bituminous, bituminous, anthracite
* Crude oil also called\_\_\_. World’s most important source of energy
* Mining coal
* Drilling for oil
  + Reservoir rock
  + Seismic survey
  + Pump jack
  + Lift pump
* Refining oil
  + Distillation
* Natural gas
* Combustion of hydrocarbons
* Compare combustion of hydrocarbons to cellular respiration
* Non-renewable
* Oil spills
* Greenhouse gasses
* Acid deposition
* Global climate change