# Science 10- Unit 1 Scientific Inquiry/Energy Flow in Global Systems

#### Introduction to Scientific Inquiry

* 1. **Definitions: (Science, Technology, Observation, Inference, System, Biosphere, etc)**
  2. **History: (Lecture notes and workbook pages 1-3, 1-4, 1-5)**
     1. **Sir Francis Bacon**
     2. **David Hume**
     3. **Sir Karl Popper**
  3. **Process Skills:**
     1. **Scientific Inquiry Model. (Text pages xiv to xvi)**
        1. **Questioning, Problem Statements, and Variables**
        2. **Hypothesis and Predictions**
        3. **Experimental Design**
        4. **Gathering and Processing Data (Tennis Ball Lab)**
        5. **LAB – ♥ Heart Rate ♥/Basketball Accuracy Lab**

**(Quiz)**

1. **The Biosphere and Energy Flow**
   1. **Introduction to the Biosphere (lecture notes & pg. 342-348, Q’s #1-10 pg. 348, WB 4-15 to 4-16)**
   2. **First and Second Law of Thermodynamics (notes & pg. 199-205, Q’s #1-10 pg. 205)**
   3. **Photosynthesis and Respiration (notes and Workbook 3-24 to 3-27)**
   4. **Living Systems and Energy Flow (notes, video, and crossword puzzle) (Supplement 4-33 to 4-34 Chinooks)**

**(Quiz)**

1. **Water and Its Properties**
   1. **Water’s Anomalous Properties (lecture notes, text pg. 72-78 Q’s #3-4 pg. 78)**
      * 1. **Surface Tension**
        2. **Three (3) States of Water**
        3. **Density**
        4. **Melting and Boiling Points**
        5. **Specific Heat Capacity ( SHC Worksheet, WB 4-7 to 4-9, pg. 375-379, Q’s #5-8pg. 380)**
        6. **Heat of Fusion and Heat of Vaporization (pg. 381-383, WB 4-10 to 4-15) Pg. 387 Q’s #13-15**

**(Quiz)**

# Climate and Biomes

* 1. **Climatographs (notes pg. 403-405 In-Class Lab pg. 405) WB 4-17 to 4-21**
  2. **Biomes (WB 4-36 to 4-41)**
  3. **Adaptations and Biomes (notes pg. 391-402)**
  4. **Climate Change (notes. Pg. 352 & Q’s pg. 354 #1-6)**

# Climate Change and Humans

* 1. **Global Warming (notes & text pg. 415, Q’s pg. 418 #1-7)**
  2. **Changing Biomes**
  3. **How Can You Change the Environment (Conservation)**

**D. Internet Research (Time permitting)**

### Unit 1 Exam

**Unit length approximately 25 Classes**