Chapter 10 Study Guide

1. Know the three temperature scales – Fahrenheit, Celsius, and Kelvin
2. Know which scale the U.S. uses. – Fahrenheit
3. Know that temperature is the average kinetic energy of the particles of a substance.
4. What is the lowest temperature possible – absolute zero
5. Why is absolute zero as low as temperature can go – Short answer - Temperature is the measurement of the movement of particles and in absolute zero the particles are not moving
6. What is heat? – transfer of energy between objects
7. Which way does heat always go – from hotter to colder
8. Know the difference between conduction, convection, and radiation and be able to identify some examples.
   1. Conduction – transfer of thermal energy through direct contact
   2. Convection – transfer of thermal energy by the movement of a liquid or a gas
   3. Radiation – transfer of thermal energy in the form of electromagnetic waves
9. Know how the state of matter is determined – it is determined by the speed of its particles and the attraction between them
10. Know that chemical changes can cause energy to be absorbed or released
11. Know whether changes of state are endothermic or exothermic (Example – Would ice melting be endothermic, absorbing energy or exothermic, releasing energy?)
12. Know why sweating cools your body-In order for water (sweat) to evaporate it needs energy. It takes the energy from your skin. When the energy leaves your skin it cools it.
13. What does an insulator do? – reduces the transfer of thermal energy
14. Why would you want to insulate your house – so the energy inside your house stays inside and is not transferred out easily