Science 1 ~ Chapter 7 Study Guide ~

1. A ball stuck in a tree has _____ energy	potential
2. Define: Kinetic Energy	Energy in motion
3. Energy is the ability to _____ _____ in the motion or position of something.	Cause change
4. The higher an object is off the ground, the more _____ potential energy it has.	gravitational
5. List and give examples of the three types of potential energy.	1. Gravitational PE – throwing a ball 2. Elastic PE – Rubber band stretched 3. Chemical PE - digestion
6. Define Mechanical Energy	KE + PE = ME
7. Differentiate between HEAT and THERMAL ENERGY	Heat: thermal energy moving Thermal energy: objects contain thermal energy
8. An electrical generator makes a light bulb glow when a hand crank is turned. What is the flow of energy transformations that occurs?	Mechanical → electrical
9. Define and give examples of: Insulator: Conductor:	Insulator: transfers thermal energy slowly (plastic on plug, air) Conductor: transfers thermal energy quickly (metals, pots/pans)
10. Explain with a diagram and words, and provide 1 example of each: Conduction: Convection: Radiation:	Conduction: molecules touching to transfer heat (Handle on a pot) Convection: rising and sinking of liquid/air to circulate warmth (water boiling) Radiation: electromagnetic waves (heat lamp for food)

Matching

A. friction B. heat C. mass D. mechanical E. speed F. work ____ 1. _____ is the transfer of energy that occurs when a force is applied over a distance. ___ 2. The kinetic energy of an object depends on its _____ and _____. ___ 3. A system of object's _____ energy is the total kinetic and potential energy. ___ 4. _____ is thermal energy moving from high concentration to lower concentrations. ___ 5. Due to ____, when surfaces rub together, some mechanical energy will always transform into thermal energy.	1. F 2. C, E 3. D 4. B 5. A
A. chemical potential energy C. elastic potential energy B. nuclear energy D. thermal energy ___ 1. Energy due to motion of particles that make up an object ___ 2. Energy stored in objects that are compressed or stretched ___ 3. Energy stored and released in the nucleaus of an atom. ___ 4. Energy stored in the bonds between atoms.	1. D 2. C 3. B 4. A