Thermal (Heat) Energy– worksheet Name: _____

1. What is the difference between thermal (heat) energy and temperature? (define)

2. In what **state of matter** would a substance have the **highest average kinetic energy** or as we commonly call it -- **temperature**?
   A. particles of all phases have the same kinetic energy
   B. the gas phase
   C. the solid phase
   D. the liquid phase

3. For the following examples, **indicate what kind of heat transfer** takes place by entering the abbreviations **CON for conduction**, **COV for convection**, and **RAD for radiation** in the blank provided:

_____ water heating on the stove
_____ a iron frying pan heating on the stove
_____ the handle on a spoon sitting in a cup of hot coffee heats up
_____ sunshine
_____ feeling the heat of a campfire as you walk passed it
_____ the blower from the furnace goes on and heats the room
_____ you pick up an ice cube and your fingers get cold

4. What type of heat transfer takes place in fluids?
   A. conduction
   B. convection
   C. radiation
   D. electromagnetic waves

5. Materials that prevent heat flow are
   A. usually metals
   B. conductors
   C. insulators
   D. radiators

6. True or False: Glass, plastic, and air are good insulators.

7. Most metals are
   A. poor conductors of heat
   B. good insulators
   C. excellent conductors of heat
   D. all the above