Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Test Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Energy Study Guide

Define the following

Conduction: Heat transfer through two objects touching.

Convection: Uneven heating and cooling through a liquid and a gas.

Radiation: The transfer of heat through air (electromagnetic waves).

3 examples of convection

1. Heat moving within a pot that is being heated

2. Uneven heating and cooling within the ocean.

3. Wind

3 examples of conduction

1. Touching a hot stove

2. Ironing clothes

3. Washing your hands with warm water

3 examples of radiation

\*1. Sun shining on \_\_\_\_\_\_\_\_\_.

2. Campfire heating a person or area.

3. Space heater warming a room.

Materials that transfer heat easily are called **Conductors.** Materials that slow the transfer of heat are called **Insulators.**

Name 4 conductors of heat (Metal)

1. Copper

2. Gold

3. Iron

4. Steel

Name 4 insulators of heat

1. Wool or cotton (cloth)

2. Rubber

3. Plastic

4. Styrofoam

Discuss one of the science labs we completed during this unit and explain the how it relates to conduction, convection, or radiation

1. One of the science labs we did was making s’mores. The space heater created radiation. The paper and tinfoil touching the s’more demonstrated conduction and the air moving inside the basket demonstrated convection.
2. One of the science labs we did involved conductors and insulators. The objects were heated at different rates by the hot water in the beaker, which then melted the butter at the top of the object.