

Transfer of Heat

Name _____

1. Which has the most thermal energy, a paper clip heated by a Bunsen burner to a temperature of 900 deg. F., or an electric iron heated to 350 deg. F? (Pg. 249)
2. If you touched the paper clip in #1 to the iron, in which direction would heat flow, from the paper clip to the iron or from the iron to the paper clip? Explain. (Pg. 250)
3. Make a 3-way Venn diagram comparing convection, conduction, and radiation. (Pgs. 251 – 253)
4. Does conduction occur more easily in solids or liquids? _____ Explain why. (Pg. 251)
5. If you hold an ice cube in your hand, your hand gets colder. Why would it not be scientifically accurate to say that coldness flows from the ice cube to your hand? (Pg. 251)
6. In each pair of materials below, circle the one that is the best conductor of heat. (Pg. 253 – 254)

WOOD OR AIR	STEEL OR RUBBER
WATER OR COPPER	PAPER CUP OR STYROFOAM CUP
GLASS OR IRON	HARD PLASTIC OR WOOD
7. What is the opposite of a conductor? (Pg. 254) _____
8. Fur is a good insulator that mammals use to maintain a constant body temperature. What other body material is used by some Arctic animals to hold in their body heat? (Pg. 254)
9. What kind of heat transfer takes place to heat the air in a room with a gas furnace?