Name: _____ Date: _____ CP: ___

Heat Transfer—Chocolate Lab

Hypothesis:

1. Which method of heat transfer is conduction? Why do you think this?

   _____

   _____

2. Which method of heat transfer is convection? Why do you think this?

   _____

   _____

3. Which method of heat transfer is radiation? Why do you think this?

   _____

   _____

Data Collection:

4. Which melting method proved to be the most efficient in this experiment? Give evidence to justify your answer.

   _____

   _____

5. Complete the chart below:

	Conduction	Convection	Radiation
Drawing *showing* heat transferring from heat source to the chocolate.			
Explanation *telling* how each method melted the chocolate.			

6. Write 3 energy transformations that occurred during this lab and an explanation for each.
   Example: Transformation: _Mechanical_ to __Electromagnetic__

   Explanation: Mechanical energy is used to turn on the microwave, and when the microwave is on there is a light inside this is electromagnetic energy.

   Transformation #1: _____ to _____

   Explanation: _____

   _____

   Transformation #2: _____ to _____

   Explanation: _____

   _____

   Transformation #3: _____ to _____

   Explanation: _____

   _____

7. What is the unit of measure for food energy? _____

8. A regular chocolate bar has 210 calories. Suppose you're only in the mood for chocolate, and you need 2520 units of energy to get through your day. How many chocolate bars will you need to eat? Show your work.

9. You need a total of 2520 units of mechanical energy. You use 1800 units of kinetic energy to get through the school day. How much potential energy do you have left after school? Use the formula ME = PE + KE, and show your work.

Conclusion:

10. Look at your hypothesis. Was your hypothesis correct? Why or why not?

    _____

    _____

    _____