HPS Ch 16.1-2 Temperature, Heat, Thermal Energy 2020       Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

OBJECTIVES: Compare and contrast the relationships between temperature, thermal energy, and heat. (Obj 3)  Describe how thermal energy is transferred by conduction, convection and radiation. (Obj 4



1. Define heat. Describe the heat flow based on the picture (hand holding ice).

1. We used to think of temperature as how hot or cold something is, but now we are focusing on temperature as related to something else. Explain and include the acronym T.A.K.E.
2. Describe the three temperature scales.
3. What is thermal energy? How is this different than mechanical energy?
4. Give an example that illustrates how thermal energy depends on mass.
5. Give an example that illustrates how thermal energy depends on temperature.
6. Draw an example of conduction and explain on a molecular level.
7. Why is conduction in gases slower than in liquids and solids?
8. Convection, which occurs in fluids, is very important! Sketch and describe three examples of convection currents that occur in natural cycles.

a.

b.

 c.

1. Describe an example of radiation. Why is radiation unique?