Name _____ Date _____ Period _____ Page _____

Heat, Temperature and Conduction Notes Sheet

Objective: _____

_____

_____

Key Concepts:

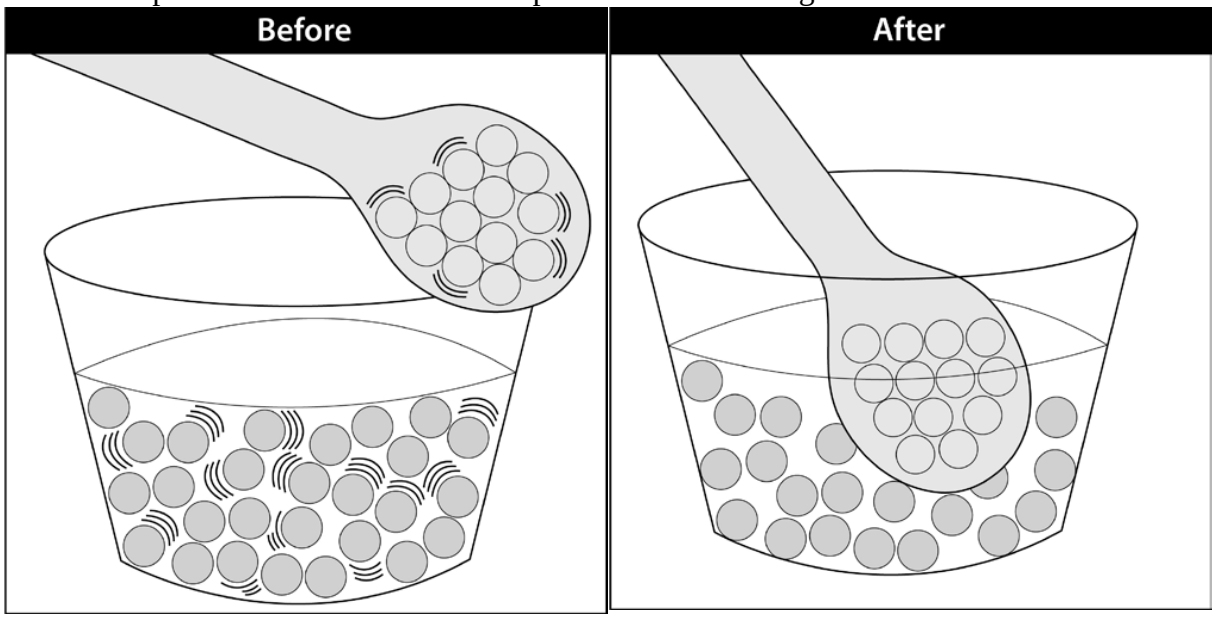
- Adding energy (heating) atoms and molecules _____ _____ results in an increase in _____.
- Removing energy (cooling) atoms and molecules _____ _____ resulting in a decrease in _____.
- Energy can be added or removed from a substance through a process called _____ _____.
- In conduction, faster - moving molecules _____ slower - moving molecules and _____ to them.
- During conduction, the slower - moving molecules _____ and the faster - moving molecules _____.
- _____ is a measure of the average kinetic energy of the atoms or molecules of a substance.
- Heat is the transfer of energy from a substance at a _____ temperature to a substance at a _____ temperature.
- Some materials are better _____ than others.

Heat, Temperature and Conduction…. Processing

In the first part of the animation, you saw what happens when a spoon is placed in hot water.

1. Explain, on the molecular level, how energy was transferred from the hot water to the room – temperature spoon. _____
   _____

2. Draw motion lines near the atoms and molecules in the "After" illustration to show how the speed of the molecules in the spoon and water changed.



3. Now that you know what happens when a spoon is placed in hot water, explain how the process of conduction caused the temperature of the washers and water to change in this activity.
   Room-temperature washers in hot water: _____
   _____
   _____
   Hot washers in room-temperature water:_____
   _____
   _____

4. You saw an animation that showed that temperature is a measure of the average kinetic energy of the atoms of molecules of a substance. Does this mean that all of the molecules in a cup of water are moving at the same speed or at a variety of speeds? Explain _____
   _____
   _____