Satree Phuket School
International Program

I. fill in the blanks in the worksheet below.

Does not need matter to transfer heat	Liquid and Gas	Solid Only	The particles carry the heat as they move	Electromagnetic waves transferring heat
Heat transfer by vibrating particles and by bumping on each other.	Heat transfer by moving particles.	There must be actual contact for heat transfer.	Electromagnetic waves carry heat	There must be actual contact for heat transfer.
Meat being heated by a hot plate stove	Air conditioning	Clothes being dried under the sun		

Heat Transfer Type	Happens in (states of matter)	Motion of particles/ transfer of heat	Specific information	Examples
Radiation				
Convection				
Conduction				

II. In each of the following situations, identify the method of heat transfer taking place. Write conduction, convection, or radiation on the line next to the statements. Choose the best answer.

1. You are stirring a bowl of hot soup with a metal spoon. The spoon starts to feel warmer because of _____.

2. You buy a lava lamp from the store. As the lamp heats up, blobs of liquid rise to the top then sink back down to the bottom. This process continues because of _____.

3. You are doing your homework at a desk that is underneath a lamp. You start to feel hotter because of _____ from the lamp.

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4. Your best friend has a bunk bed. You move from the bottom bunk to the top bunk and notice that the air is warmer. The warm air rises because of _____.

5. You are in science class and want to see if the hot plates were used recently. You place your hand over the hot plate. Without touching the hot plate, your hand feels warmer. Heat is transferred to your hand by _____.

6. You are roasting marshmallows at a campfire. The metal skewer (stick) that you're cooking your marshmallow on burns your hand because of _____.

III. Using words from the word boxes below, complete the paragraph about heat transfer.

faster	hot	less	solid	fluid
conduction	more	convection	energy	emit
warmer	matter	transfer	absorb	temperature
radiation	contact	cold	vibrate	waves

All _____ has heat. Heat is a form of _____ caused by particles in an object that

_____. The _____ the particles of an object vibrate, the _____ the object

will be. Because particles of an object are always moving, heat _____ is always happening. Heat always

flows in the same direction: from _____ to _____. Heat transfer will stop once two objects reach the

same _____. This is known as equilibrium.

There are three key ways that heat transfers. With _____ objects, heat transfers when the objects come

into direct _____ with other things. This is known as _____. Liquids and gases

are different. Because these two states of matter flow, or are _____, heat transfer happens when

warmer, _____ dense particles rise and cooler, _____ dense particles sink. This ongoing process is

known as a _____ current. Heat can also be transferred through space (distance) in the form of

_____. This process is known as _____. All objects give off, or _____, some heat.

All objects also take in, or _____, heat.

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