

Reflections and Conclusions

1. Identify the type of energy transfer (conduction, convection, or radiation) for each description below.

Example of Heat Transfer	Conduction, Convection, or Radiation
Hot chocolate is stirred with a spoon and the spoon gets hot	
The Sun warms your skin on a cold day.	
Macaroni rises and falls in a pot of heated water.	
You burn your hand by touching a hot stove.	
Warming your feet in front of a fire.	
Hot air balloon rises.	
The air near the ceiling in a room is warmer than the air near the floor.	
The material in a lava lamp rises and falls.	
The sidewalk increases in temperature on a sunny day.	
The sidewalk burns your bare feet in the summertime.	

2. When particles of matter are in direct contact, conduction of thermal energy occurs in which states of matter?
3. When particles of matter are in direct contact and movement occurs in the substance due to convection, thermal energy transfers in which states of matter?
4. Which states of matter are required for energy transfer to occur when radiant energy is the source?
5. Use your data from Part II to draw a conclusion: In thermal energy transfer by conduction, how does heat move between objects that are touching?
6. Use your data from Part III to draw a conclusion: In thermal energy transfer by convection, what is the pattern of heat transfer through fluids?
7. Use your data from Part IV to draw a conclusion: In thermal energy transfer by radiation, how does distance from the thermal energy source affect the amount of thermal energy transfer occurring in a substance?