

Name: _____

Date: _____



9.2 Heat Transfer

READ



Thermal energy flows from higher temperature to lower temperature. This process is called heat transfer. Heat transfer can occur three different ways: heat conduction, convection, and thermal radiation. Using section 9.2 of your student text as a guide, define each method of heat transfer.

Heat conduction:

Convection:

Thermal radiation:

PRACTICE



Read each scenario below. Then explain which type of heat transfer is described. Some scenarios involve more than one type of heat transfer.

1. Mia places some frozen shrimp in a strainer and pours hot water over it so the shrimp will thaw faster.
2. On a hot summer day, Juan can walk comfortably in bare feet on the concrete sidewalk, but finds that the asphalt road will burn the soles of his feet.
3. A hawk soars upward, riding a thermal.
4. An electric space heater warms an office.
5. A mother duck sits on her eggs to keep them warm.
6. A car parked in the sun reaches an interior temperature of 140°F in 40 minutes.
7. Nick always adds milk to his coffee so that it's not too hot to drink.
8. A strong sea breeze makes a regatta (sailboat race) more exciting.
9. Warm water piped under a marble floor makes the floor feel warm to bare feet.
10. The warm water pipes under the marble floor heat the entire room.