

[Heat transfer Facts for Kids \(kiddle.co\)](http://kiddle.co)

Heat moves from the hotter body (higher temperature) to the colder one (lower temperature). The bodies in question may be in a [solid](#) state, a [liquid](#) state or a

There are three modes of heat transfer:  
[conduction, convection and Radiation](#)

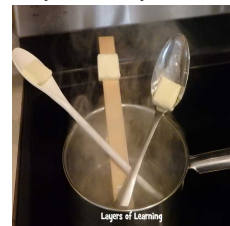
**Conduction** -(or thermal conduction) is the movement of heat from one object to another one that has different temperature when they are touching each other. (Physical contact)

For example, we can warm our hands by touching hot-water bottles. When the cold hands touch the hot-water bottle, heat flows from the hotter object (hot-water bottle) to the colder one (hand).



**Metal conduct heat more than wood.**

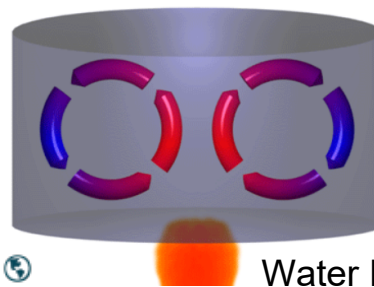
(Think of touching a metal spoon vs wooden spoon when stirring a pot on the stove.)



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**Convection** - is the movement of heat because of the movement of warm matter (Liquid or gases). Warmer molecules move away from the heat source and gets replace by the colder ones. (Heated by a heat source)

For example, atmospheric circulation moves warm air to cool places, causing wind. Wind, in turn, can enter and cool a room if the window is open. The movement of the clouds, the ocean currents and many types of heaters are examples of convection.



Water Boiling

[How Do Hot Air Balloons Work? - YouTube](#)



Convection takes place when warm particles move in currents, or waves. For example, when a pot of water is boiled, the water particles closest to the bottom of the pot are heated the most.



The cooler water particles drop to the bottom of the pot and take the place of the heated ones. So, the heat transfer is taking place because of the movement of the warm particles.



Radiation -is heat that is moved from one place to another by electromagnetic radiation waves or rays. It may be felt as heat or seen as light. It does not require to be transfer through something. Dark, dull surfaces give out more thermal radiation while bright and shiny surfaces give out comparatively less thermal radiation. Those surfaces which give out thermal radiation well also absorb thermal radiation well. For example a person in front of a fire can warm up because of the light of the fire, even if the air is cold.

Another example of thermal radiation is the heat that comes from the Sun to the Earth.

