

# 10.4 Heat Transfer



## Across

- Heat is transferred by invisible waves called \_\_\_\_\_ waves.
- \_\_\_\_\_ is the transfer of heat through a solid or between a solid that is touching another solid, a liquid or a gas.
- When invisible waves of infrared energy come into contact with a solid, the particles in the solid vibrate \_\_\_\_\_.
- Both conduction and convection involve the movement of \_\_\_\_\_. Radiation does not.
- \_\_\_\_\_ (radiant energy) is the transfer of heat using waves.

## Down

- Coloured solids can absorb and reradiate infrared waves, but \_\_\_\_\_ solids, liquids and gases allow infrared waves to pass easily through them.
- Conduction occurs in one \_\_\_\_\_ only, from a region that is warmer to a region that is cooler.
- Oven mitts prevent the rapid \_\_\_\_\_ of heat to a baker's hands when he or she removes a cookie sheet from the oven.
- \_\_\_\_\_ is the transfer of heat through a fluid (a liquid or a gas).
- The circular pattern of moving particles within fluids is called a convection \_\_\_\_\_.
- Convection, the transfer of thermal energy by moving particles, occurs in \_\_\_\_\_ (liquids and gases).