

### Transfer of Heat Solutions

1. Conduction is heat moving through solids
2. Four factors that affect conduction are Difference in temperature, Surface area, Distance to travel, and material
4.
  - a. The difference between conduction and convection are:  
Conduction is in solids while convection is in liquids  
Particles in Conduction are held in place while particles in convection can move
  - b. For convection to take place we need heat (Q) to be present and space for the Q to move
5.
  - a. Heat moving via electromagnetic waves
  - b. Biggest factor is colour of material
  - c. Ideal emitter is white while the ideal absorber is black
  - d. Dark colours absorb heat easier so they can keep you warmer in winter
6.
  - a. The three parts of a solar collector are  
Collectors – collects radiation from the sun  
Pipes – conduction of heat into these pipes  
Tank – Heat moves through the pipes via convection to a storage tank
  - b.
    - i. South side roof in Canada
    - ii. North side roof in Australia
7.
  - a. Thermography is the process of taking pictures using thermal radiation
  - b. This is used to detect illness in the body or for finding poor insulated places in a house