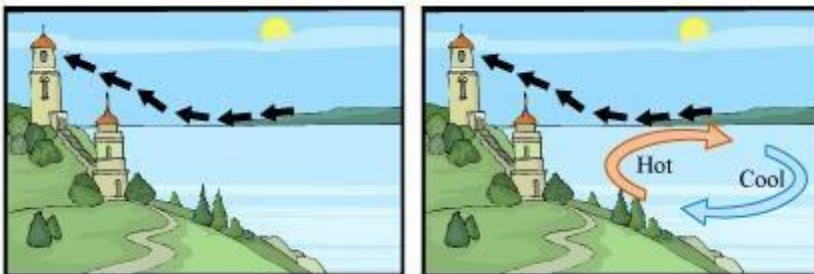


# Heat

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- The measure of degree of hotness or coldness of a substance is called its **temperature**.
  - The device that is used to measure the temperature of a substance is called **thermometer**. Thermometers are of two types:– clinical (used for measuring temperature of human body) and laboratory (used for measuring temperature of common objects). The temperature range of clinical thermometer is  $35^{\circ}\text{C}$  to  $42^{\circ}\text{C}$  and that of laboratory thermometer is  $-10^{\circ}\text{C}$  to  $110^{\circ}\text{C}$ . The unit for temperature is  $^{\circ}\text{C}$ . The normal temperature of human body is  $37^{\circ}\text{C}$ .
  - The two most commonly used scales in which temperature is read are the Celsius scale and Fahrenheit scale.
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- **Conduction:** The transfer of heat in solids usually takes place by this method. Substances that allow heat to pass through them quite easily are called conductors and those that do not, are called insulators.
  - The substances that allow heat to pass through them are called **conductors** of heat. Iron, copper, and aluminium are examples of conductors.
  - The substances that do not allow heat to pass through them are called **poor conductors** of heat or **insulators**. Plastic and wood are examples of insulators.
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- **Convection:** The transfer of heat in liquids and gases takes place by convection. Land breeze and sea breeze are a result of unequal heating of air present over land and sea by the sun.

## Sea Breeze



## Land Breeze



- **Radiation:** Transfer of heat by radiation requires no medium. Heating of Earth by Sun is an example of heat transfer by radiation.

