

4. HEAT

***Heat** is a form of energy which makes substances hotter.

***Temperature:-**

The degree of hotness (or coldness) of an object is called temperature.

***Thermometer:-**

A device which is used to measure the temperature is called thermometer.

***Types of thermometer:-**

a} Clinical thermometer

b} Laboratory thermometer

a} Clinical thermometer:-

Such type of thermometer which is used to measure the temperature of human body is called clinical thermometer.

b} Laboratory thermometer:-

Such type of thermometer which is used for measuring the temperature in a science laboratory is called laboratory thermometer.

***Similarities and differences between clinical and laboratory thermometer:-**

#Similarities

a} Both the thermometer is used to measure the temperature.

b} Both are made up of glass tube.

c} Mercury is found in both the thermometer.

#Differences

a) The range of clinical thermometer is 35 to 42 degree celsius while the range of laboratory thermometer is -10 to 110 degree celsius.

b) Kink is found in clinical thermometer but not found in laboratory thermometer.

Transfer of heat:-

To carry heat energy from one part to another is called transfer of heat.

-: METHODS OF TRANSFER OF HEAT :-

Heat can be transferred from one object to another by three methods-

1) Conduction

2) Convection

3) Radiation

1) Conduction :-

"The transfer of heat in solids from high temperature to the low temperature is called conduction."

eg:- If we dip a steel spoon in a cup of hot milk , we find that the temperature of spoon rises up and it becomes hot by the process of conduction.

***Conductor: _**

“Such material through which heat can pass easily is called conductor.”

eg:- Iron, Steel, Aluminium, Copper.....etc.

***Insulator: _**

“ Such material through which heat cannot pass easily is called insulator.”

eg:- Paper, Air, Cotton, Plastic.....etc.

Uses of good conductors and bad conductors.....

***The** cooking utensils are made of metals because through them heat can pass easily and food can be quickly prepared.

***Mercury** is used in the capillary of thermometer because mercury is the good conductor of heat.

***Handles** of cooking utensils are provided with handles made of plastic(or,wood) because plastics are the bad conductor of heat so we can easily lift the hot cooking utensils safely.

***We** wear woollen clothes in winter because wool is the bad conductor of heat and traps the body heat and keeps us warm.

2) Convection:-