

DATE: 18 SEP 2020

SUBJECT : SCIENCE

CHAPTER-7:

TEMPERATURE AND HEAT

TOPIC-4:

HEAT AND EFFECTS OF HEAT

EFFECTS OF HEAT

Heat: The form of energy that transfers from high temperature region to low temperature region is called heat.

Sources of Heat: The sun is the main source of heat for earth. Besides burning objects or fuel, glowing electric bulb, electric current etc

Unit of heat: The units of heat are (a) calorie and (b) Joule . The terms hot and cold are relative.

Effects of heat: Heat can bring changes to object/substances. The effects of heat are-

- (a) Heat can increase the temperature of an object or substance.

- (b) Heat can change the state of substance

- (c) Heat can cause chemical changes

- (d) Heat can change the shape and size & volume of objects

Activity-1: The effect of heat on an egg: Egg is heated by using stove for 10 min keeping it in water in a container. After cooling, the shell has been removed. It is found that the inside liquid has become solid. Solidification of liquid inside the egg takes place due to protein. Questions based on this activity:

1. How did the temperature of water change when the stove was switched on?
2. What happened to the level of water and why?
3. What happened to the content of the egg?

EFFECTS OF HEAT

Activity-2: Place a metal wire in the freezer for half an hour. Trace along its length on a sheet of paper using a pencil. Heat the wire over a flame and place it over the previously traced mark to compare the length.

What do you observe?

Explanation: The length of the wire becomes greater when it is heated. This is because materials expand when they are heated and contract when they are cooled. This happens to solid, liquid and gases.

Example: It is easier to open tight doors in winter than in summer. It is due to effect of heat on objects.

QUESTIONS: HOME ASSIGNMENT

1. What is heat? Write the units used to measure heat.
2. Write any four effects of heat.
3. Describe an activity to show that heat can change the state of substance.
4. Describe an activity to show that heat can change size of an object
5. Gaps are given between sections of rail in a railway track. Give reason.
6. Coastal areas experience moderate climate throughout the year. Give reason.