

Chapter 3 : Fibre to Fabric

- **Fibres** : Long fine continuous threads of filaments are obtained from plants and animals

Two types of fibres

(I) Animal fibres

(II) Plant fibres

- Silk and wool are common animal fibres
- Silk comes from silkworms and wool is obtained from sheep, goat and yak. Hence silk and wool are animal fibres.
- The hairs of camel, llama and alpaca are also processed to yield wool.
- In india, mostly sheep are reared for getting wool.
- Sheep hair is sheared off from the body, scoured, sorted, dried, dyed, spun and woven to yield wool.
- **Sources of wool**: wool is obtained from sheep, yak, Angora goat, goat, camels, llama and Alpaca.
- **Obtaining wool fibre**: Shearing fleece of the sheep along with a thin layer of skin is removed from its body.
- **Processing of wool fibre**:
 - (1) **Scouring**: Sheared hair is cleaned and

washed in tanks to remove grease, dust and dirt.

- (iii) Sorting: cleaned hair is sent to a factory where hair of different textures are separated.
- (iv) Hair is sent into a carding machine where the loose wool fibres are combed into a sheet and then twisted into a rope or silver.
- (v) This silver is twisted and stretched into a yarn.
- (vi) The yarn is wound to form balls of wool.

• Silk

- silkworms are caterpillars of silk moth.
- During their life cycle, the worms spin cocoons of silk fibres.
- Silk fibres are made of a protein.
- Silk fibres from cocoon are separated out and reeled into silk threads.
- weavers weave silk threads into silk cloth.

• Home Assignment

- Q1. Define a fibre.
- Q2. What are the different sources of wool?
- Q3. Differentiate between natural and man-made fibres
- Q4. What is selective breeding?
- Q5. Match the column

A

1. scouring
2. Cocoon
3. Yarn
4. Mulberry leaves

B

- a. yields silk fibres
- b. wool yielding animals
- c. food of silk worm
- d. cleaning silk skin

Chapter 4: Heat

- Heat : It is a form of energy, which makes any object hot or cold.
- Temperature : The degree of hotness of an object is called temperature.
- Our sense of touch is not reliable to measure the temperature.
- Thermometer is a device used for measuring temperatures.
- Heat is the cause of temperature.
- The normal temperature of the human body is 37°C .
- The material which allow heat to pass through them easily are conductors of heat.
- The materials which do not allow heat to pass through them easily are called insulators.
- Clinical Thermometre : It is a thermometer used to measure the temperature of our body. It consists of a long, narrow, uniform glass tube with a bulb containing mercury at one end. There is a kink. It measures a range of 94°F to 108°F .
- Laboratory Thermometer : It is a thermometer used to measure the temperature of object other than our body. It consists of a column of mercury enclosed in a glass casing. The column is continuous without any kink. It measures a range of temperature from -10°C to 110°C .

- Sea Breeze : During the day, the land heats up faster than the sea.
- Warm air above the land rises and cold air from sea takes its place.
- Warm air from the land moves towards the sea to complete the cycle.
- This produces a sea breeze from the sea to the land.
- Land Breeze : At night the land ^{cools} heats up faster than the sea.
- The warm air above the sea rises.
- This warm air is replaced by colder air from the land producing a land breeze.
- Transfer of Heat : Heat flows from a hotter object to a colder object until both objects reach the same temperature.
- The heat flows from a body at a higher temperature to a body at a lower temperature. There are three ways in which heat can flow from one object to another. These are conduction, convection and radiation.
- Conduction : It is the process by which heat is transferred from the hotter end to the colder end of an object.
- Convection : It is the flow of heat through a fluid from places of higher temperature to places of lower temperature by movement of the fluid itself.
- Radiation : It is the mode of transfer of heat in which energy is directly transferred

from one place to another. It does not need any material medium.

Home Assignment

- Q1. Define heat?
- Q2. Define temperature. What is its unit?
- Q3. Differentiate between conductor and insulators?
- Q4. What is conduction?
- Q5. Name the process by which heat transfer in air.
- Q6. Fill in the blanks.
 - a. The bulb in thermometer contains _____.
 - b) Heat always flows from a hotter object to _____.
 - c. Insulators are _____ conduct of heat.
 - d. From the sun the heat comes to us by the process called _____.