

Chapter 3 : Fibre to Fabric

- Fibre : Fibre is a fine thread-like filament
- Fabric : woven cloth

- There are two types of fibres
 - (a) Natural fibres : the fibres which are obtained from plants and animals.
Example : cotton, jute, silk, and wool.
 - (b) Synthetic fibres : are from chemical substances.
Synthetic fibres are manmade fibre. They are also called artificial fibres.
Example : rayon, nylon, polyester, etc.

- Fibres from plant sources
 - 1. Cotton : Cotton comes from cotton plant. Both, plant and the fibre are called cotton. Cotton grown in black soil and warm climate.
 - 2. Jute : jute is obtained from stem of jute plant.
 - 3. Hemp : The drug plant.
 - 4. Flax : Comes from flax plant used for weaving linen.
 - 5. Coir : is the fibre which comes from coconut palm.

Processing of Cotton Fibre

1. Ginning: Removal of seeds from fibre
2. Carding: Cleaning and separating of fibres stuck together.
3. Drawing: stretching of fibre
4. Spinning: drawing yarn thread from cotton fibre
5. Weaving: making cloth or fabric from yarn.

Processing of jute

1. Retting of plant: After harvesting the jute plants are retted in water for 10 to 15 days or more.
2. Stripping: the stalks are stripped fibres to bring out of the fibres. This is done by hand.
3. washing and drying: The stripped fibres are washed and dried in sun.

Fibres from Animal Sources.

(a) Wool: Wool cloth is spun from yarn made from the fibres of the thick fleece of sheep.

(b) Silk: Silk thread is obtained from the saliva of an insect called silkworm

Processing of wool

1. Shearing: The process of removal of wool from the sheep's skin.

2. Grading: The process of separating fleece from damaged wool.
3. Carding: The process after the wool has been washed and dried, it is passed through the rollers.
4. Spinning: The process by which fibres are gathered together and drawn into a long rope and then twisted to make yarn.

Home Assignment

- Q1. What are natural fibres? Give example
- Q2. Write the difference between natural and synthetic fibres.
- Q3. What is ginning?
- Q4. Define weaving.
- Q5. What are looms?
- Q6. Choose the correct option
 - (a) Cotton is obtained from _____ of plant (Seed/stem)
 - (b) Nylon is _____ fibre. (Natural/synthetic)
 - (c) Jute is obtained from _____ (Plant/animal)

Chapter 4: Sorting materials into Groups

Matter: Anything that occupies space and has mass is called matter. Objects around us are made up of a large variety of materials.

Material: A material is a substance which is used for making things. An object could be made of a single material or of many different types of materials.

General properties of material

(A) Appearance: Shine or Roughness

- All metals are lustrous, some are more and some are less.
- Wood, rubber or a piece of rock is non-lustrous.

(B) Hardness: Hard and soft

- Rocks, iron and many metals are hard.
- Hard materials may be brittle, malleable and ductile.

(C) Thorough Visibility:

- Transparent: object through which light may pass. ex - glass, some plastics, sugar and salt solution in water.
- Translucent: object through which light may pass partially. ex - milky glass, milk.

- Opaque : object through which light does not pass. Ex: wood, metals, rock wall.

(D) Good and bad conductor of heat :

- All metals are good conductors of heat
- Wood are bad conductors of heat.

(E) Combustible Substances : The materials which catch fire on heating are combustible substance. Ex:- wood, plastic, and paper. etc.

(F) Some material may float and some sink in water

- Material which sinks in water is denser than water
- Material which floats on water is less than water

- Materials are grouped together on the basis of similarities and difference in their properties.

• Advantage of classifications:

- (a) Helps in identification of objects
- (b) Helps in sorting objects.
- (c) Helps in locating things.
- (d) Makes study of different objects easy and more meaningful rather than studying each other separately.
- (e) Helps to understanding similarities and dissimilarities among objects.

Home Assignment

- Q1. Name five items which can be made of plastics
- Q2. What is the difference between soft and hard material?
- Q3. What is the difference between transparent and translucent?
- Q4. Match the following

A

1. Newspaper
2. Chair
3. Shoes
4. Nail
5. Candle

B

- a. Wood
- b. paper
- c. wax
- d. Leather
- e. metal