

CBSE Notes

Chapter IV

Sorting Materials into groups

Object :

Object is a things that is made up of one or more material .

Example : pencil , chair , pen , book , food item , etc

Material :

Material is what object is made up of.

Example : pencil is made up of wood , metal , graphite , etc.

Object around us made up of large variety of materials:

Sr.No	Object	Material the are made up of
1	Chair	Wood , plastic, iron
2	Toys	Wood , plastic, Paper
3	Shoes	Leather
4	Clothes	Cotton, silk, polyester , nylon
5	Tumbler	Plastic, glass
6	Utensils	Plastic, iron , aluminium , steel
7	Pen	Plastic , metal, wood .

Grouping:

The process of classification of Object based on some known criteria is called grouping.

Why do we group them?

There are too many object around us . That's why we need to group them .

Properties of materials :

- **Appearance :**

The various parameters governing the appearance of materials are colour , texture , roughness , Shape, size etc.

- **Lustrous:**

Materials that shine are called lustrous material.

Example : Gold. , Silver , copper , etc .

- **Non- lustrous:**

Materials which do not shine are called non-lustrous materials.

Example: wood , plastic .

- **Hardness :**
You cannot change the shape of hard materials by pressing it or cut it easily .
Hardness materials used to make vehicle , machine ,and furniture etc.
- **Soft :**
You can easily change the shape of soft materials by pressing it or scratching it.
Soft materials used to make cushion and clothing .
- **Ductility :**
Ductile materials can be drawn into wires.
Example : copper , aluminium , etc.
- **Malleability :**
A solid materials is said to be malleable if it can be beaten or pressed into sheath or foil.
Example : Gold , silver . Etc.

Transparency:

a) Transparent :

Those substance and materials through which can be seen are called transparent .

Example : glass , water , air , and some plastic.

b) Opaque :

Materials through which we are not able to see are called opaque..

Example : wood , metal , plastic , cardboard , wall , tree etc.

c) Translucent :

The materials which object can be seen , but not clearly , are known as translucent.

Example : oiled paper , frosted glass etc.

• **Float or sink**

a) Float on water:

Object which are less denser than water , will be float on water.

Example : plastic bottles, rubber ball , leaves , balloon etc.

b) Sink in water :

Object which are denser than water will be sink in water.

Example : sand , stone , coins etc.

• **Solubility :**

The ability of substance to dissolve in water is called solubility.

a) Soluble :

Substance that completely disappeared or dissolved in water are known as soluble substance.

Example : sugar , salt etc.

b) Insoluble :

Substance that do not mix with water or do not disappear even after we stir long time are known as insoluble substance .

Example: sand , stone , oil , etc.