

Introduction

- Every object around us has different shapes, colours and uses.
- Whether food, clothes, chair, utensils, books, toys, water, stones, cycle any many more.
- All these objects can be grouped together on the basis of their properties such as appearance, shape, texture, features, characteristics etc.

Materials

- We know that all objects are made of some or the other material. For example, table is made of wood, nails are made of iron and so on.
- Materials can be man - made like glass, plastic, steel, cement or natural like wool, cotton, silk etc.
- Tumbler is an object we use in our day - to - day life. It can be made from plastic, glass, brass, steel etc.
- Objects can be made either from a single material or from combination of different materials.
- Material is chosen for an object on the basis of the requirement. For example, a tumbler is used to store liquids, so paper and cloth cannot be used for making a tumbler. Metal, glass, plastic or any other hard material can be taken.

Properties of Materials

Appearance

- Material looks different from each other wood looks very different from iron, copper and aluminium.
- Also, there might be some similarities between iron, copper and aluminium.
- Metals usually have lustre. For example, gold, copper, aluminium iron etc.
- Wood on the other hand is non- lustrous.

Hardness

- Material can be soft or hard to touch.
- Materials that can easily be compressed or scratched are called soft material. For example, cotton or sponge.
- Materials that are difficult to compress or scratch are called hard material. For example, metals like copper, iron etc.

Solubility in water

- Take four glasses of water and add sugar, salt, sawdust and chalk powder to each and stir the content with a spoon.
- After few minutes, some of these disappear and others remain in the water.

- Substances, that disappear or dissolve in water are called soluble substances like sugar and salt.
- Substances, that don't disappear or dissolve in water are called insoluble substances like sawdust and chalk powder.

Objects may either float or sink in water

- Some objects either float on water or sink to the bottom of the container.
- Objects which are light in weight float in water whereas object which are heavy sink to the bottom.
- Dried leaves fallen on the surface of a pond floats while stones, heavy bricks etc sink in water.

Transparency

- Materials that allow light to pass through them completely are called Transparent material. Things can be clearly seen through these materials. Examples: glass, water, air.
- Materials that do not allow light to pass through them completely are called opaque materials. Things cannot be seen at all through these materials. Examples: wood, metals etc.
- Materials that allow light to pass through them partially are called Translucent materials. Things can be seen but not clearly through these materials.



Transparent



Translucent



Opaque