## SCIENCE Sorting Materials Into Groups Chapter – 4

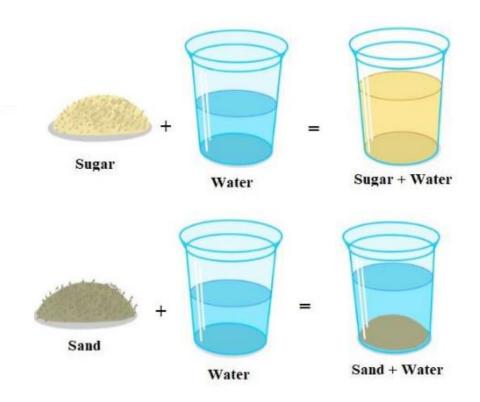
## 1) What is classification ?

Ans. Classifying materials means identifying each material according to its subject, so that materials on similar subjects can be grouped together on the shelves.

Wood and paper are non-lustrous materials. Glass and iron are lustrous materials. Glass is transparent, paper is translucent and wood and iron are opaque materials. Wood and iron are hard materials and paper and glass are soft materials.

#### 2) What are soluble substances?

Ans. Soluble substances are those substances that dissolve in water.eg: salt , sugar, etc.



We can see that the sugar has disappeared or dissolved in water completely. On the other hand, the sand does not dissolve in water. As a result, the sugar substance is soluble, while the sand is referred to as an insoluble substance.

3. How do aquatic plants and animals survive in water ?

Ans. Aquatic plants and animals are able to survive in water as water contains 0.7% of dissolved oxygen which is taken inside their body by specially designed organs like gills and by general body surface in plants.

4. Why are handles of utensil made from wood or plastic ? Ans. Handle is made of wood or plastic as they are insulators and will not become hot while heating. As they are bad conductor of heat so that you can hold it comfortably without harm your hands .

#### 5. Define density.

Ans. The mass per unit volume of a substance is called density. Density = mass/volume .Or we can say, Density is the measurement of how tightly a material is packed together

#### 6. Name two natural and two man-made materials.

Ans. The materials available in nature are called natural materials. Example: natural fibres, water, trees are natural materials. The materials which are made by man are called man made materials. Example: artificial fibres, table, glasses are man made materials.

# 7. What do you understand by term "conductivity"? Give examples of any 3 good conductors.

Ans. We can define conductivity as a property of the material that conducts electricity or heat. Copper, Brass, Steel, are good conductors of electricity.

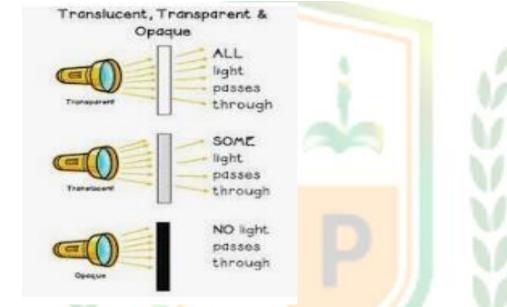
## 8. Why grouping of things are necessary for us?

Ans. Materials are grouped together on the basis of similarities and differences in their properties. Grouping the objects helps us to arrange them in a systematic manner. The objects when grouped are easy to handle. When grouped it is easy to know the properties of objects clearly. Grouping also makes easy to compare two objects.

9. Distinguish between transparent and opaque objects.

Ans. If you are able to see clearly through an object, it is allowing light to pass through it and is transparent. For example :water,clear glass etc.

Opaque Objects : If we cannot see through an object at all, it is an opaque object. For example: wooden door, wall etc.



10. State the difference between magnetic and non- magnetic material.

Ans. Magnetic materials : The materials which are attracted towards a magnet are called magnetic materials, Examples : Iron, nickel and cobalt.

**Non-magnetic materials** : The materials which are not attracted towards a magnet are called non-magnetic materials. Examples: Wood, glass, rubber, etc.



## 11. Define material.

Ans. The matter of which an object is made, is called material. For example, glass, steel, wood, stone etc. Materials can be pure or impure, living or non-living matter. Materials can be classified on the bases of their physical and chemical properties.

## 12. Distinguish between solid, liquid and gases.

Ans. Solid:

- i) A solid has definite volume and shape
- ii) solid cannot be compressed.
- iii) solids have high density.
- iv) force of attraction between the particles in solid is very strong.
- v) The space between the particles of solids is negligible.
  Liquid:
- i) Liquids have fixed volume, but not fixed shape.
- ii) Particles of Liquids are closely to each other (but not as close as solids)
- iii) Liquid does not fill container completely like gases
- iv) Liquids are able to flow easily.

Gases:

- i) They are easy to compress
- ii) They expand to fill their containers,
- iii) They occupy far more space than the liquids or solids from which they form.
- iv) Gases have no definite shape or volume.

