

# Exercise - I (Matter)

classmate

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1. Define matter.

Ans Anything that has mass and occupies space is called matter.

2. What are the ~~two~~ two main types of ~~matter~~ matter? Give two examples ~~for~~ for each type.

Ans The two types of matter are:

• Living ~~things~~ matter: The Earth is home to all kinds of plants and animals. They can grow, move and reproduce on their own.

Ex- plants, lotus, etc

• Non living matter: Most of the matter in the universe is non-living. It does not ~~grow~~ grow, move or reproduce on its own. It can be natural ~~made~~ man made.

• Natural matter: It occurs in nature and can be used to make more useful substances, e.g., wood, coal, silk, water, stone, cotton etc.

• Man-made matter: It is produced artificially from natural matter, e.g., plastic, soaps.

- gases - they are far apart with each other

6) substances that flow are <sup>like</sup> ~~called~~ liquid, gas.

7)	solids	liquids	gases
	common salt	milk	oxygen
	water	mercury	LPG
	stone	Blood	
	sugar	coconut oil	
	coal	kerosene	
	Butter		
	copper		

# Matter

## EXERCISE - II

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1 Name the smallest particles from which matter is made up of.  
ANS) matter is made up of atoms atoms

Give reasons:

a) Liquids and gases flow but solids do not.  
ANS) The molecules of liquids and gases are far apart i.e. have more gaps, intermolecular attraction force is very less as compared to solid, hence liquids and gases can flow but solids do not as gaps in solid molecules is less and molecular force of attraction very strong.

b) A gas fills up the space available to it.  
ANS) Intermolecular force of attraction is least and intermolecular spaces are very large, hence gases can fill up the space available to them.

c) The odour of scent spreads in a room.  
ANS) Due to the inter-mixing of scent molecules and air molecules, scent fumes spread into the room.

d) We can walk through air.  
Ans. The molecules of air are far apart i.e. large gaps and we can walk through it easily.

e) Liquids have a definite volume but no definite shape.  
Ans. The molecules of liquid are loosely packed and intermolecular force of attraction is small but number of molecules in it remain the same. Hence liquids have definite volume but no definite shape.

f) When a teaspoon of sugar is added to half a glass of water and stirred, the water level in the glass remains unchanged.  
Ans. When a teaspoon of sugar is added to half a glass of water and stirred, the water level in the glass remains unchanged because the sugar particles are squeezed between the water molecules as intermolecular gaps are more in liquids.

g) When an empty gas jar is inverted over a gas jar containing a coloured gas, the gas spreads into the empty jar.  
Ans. This is because gases can diffuse or flow in all directions.

h) A red ink drop added to a small amount of water in a glass turns the water red in some time.

Q. When we put a drop of red ink in a glass of water, its particles diffuse with particles of water slowly but continuously and the water turns red.

Q) Define :

a) Cohesive force

b) Diffusion

c) Brownian movement

Ans) a) Cohesive force - The force of attraction between particles of the same substance is called cohesive force.

b) Diffusion: The phenomenon of intermingling of particles of the same ~~sub~~ substance is called cohesive force.

c) Brownian: The zig-zag motion of particles suspended in a medium is called Brownian movement.

10) when we insert the bottle and  
blow air into the bottle through  
side opening.

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b - Man-made matter: It is produce artificially from natural matter, e.g., plastic, soaps.

glass, etc.

3. Differentiate between living and non-living matter

ANS • Living matter:

- The earth is home to all kind of plants and animals. They can grow, move and reproduce on their own.

- ~~Non living matter~~ It is natural only.

• Non living matter:

Most of the matter in the universe is non-living. It means that it does not grow, move or reproduce on its own.

• It can be natural or man-made

4. Select natural and man made matter from the following list.

ANS Natural matter - Wood, silk, coal, water, fruit

Manmade matter - plastic, medicines, detergents, ceramic, cotton, glass, nylon.

### Exercise III

1) When a substance is heated, it can cause

- Interconversion of states of matter.
- Thermal expansion of the substance
- Chemical change

2 a) The process by which matter changes from one state to another and back to original state, without any change in its chemical composition.

- b) Two conditions are
1. Change in temperature
  2. By applying pressure.