H.W
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Matter and its Composition

Worksheet - 1

1) What are the five basic elements of which matter is made up of according to the ancient philosopher?

Ans→ According to the ancient philosophers, matter is made up of five basic elements - air, earth, fire, sky and water.

2) What do you understand by the term matter? Give examples.

Ans→ Matter is anything that has mass, occupies space and can be perceived by our senses. Some examples of matter are oxygen, milk, metal, glass etc.

3) Write one point to differentiate an atom and a molecule.

~~An atom is a basic element made up of protons~~

Ans→ An atom is the smallest possible unit of matter that exhibits all the properties of that matter. Molecule is a chain of atoms bonded together and also has an independent existence.

4) Mention the characteristics of particles of matter.

Ans→ The characteristics of particles of matter are:

- Particles of matter have space between them.
- Particles of matter are always in random motion.
- Particles of matter attract each other.
- Particles of matter are very very small.
- Brownian motion.

5) Differentiate between solid, liquids and gases.

Ans→	Solids	Liquids	Gases
①	Molecules are closely packed; have negligible intermolecular space.	Molecules are not closely packed; have more intermolecular space.	Molecules are at greater distance from one another have maximum spa
②	have fixed shape	Have no fixed shape	Have no fixed sha
③	have fixed volume.	Have fixed volume	Have no fixed v
④	Do not flow.	flow from a higher level to a lower level.	flow in all direc
⑤	Effect of pressure is very low.	Effect of pressure is higher than a solids	Effect of pressure i very high.

1) Define sublimation. Name any two materials that sublimes.

Ans→ Sublimation is the process by which a substance changes from solid to gaseous state on heating. Ex- dry ice, mothball, iodine chrystals, camphor.

2) What do you mean by interconversion of states of matter? Mention the factors that caused the interconversion.

Ans→ The change of state of a matter from one form into another is called interconversion of states of matter. Temperature and pressure are the two factors responsible for interconversion of matter.

8) What do you mean by fluids? Give examples.

Ans→ All substances that can flow are called fluids. Liquids and gases are fluids.

9) Give one word for the following :-
a) the change of vapour into a liquid :→ condensation
b) the change of solid directly into gases without

undergoing into liquid medium. → sublimation

c) The substances that can flow → fluids.

10) Give reason for the following :-

a) A teaspoon of sugar added to 100ml of water does not increases its volume.

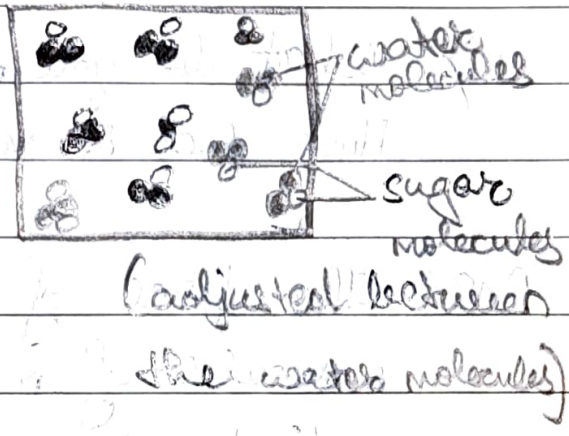
Ans → A teaspoon of sugar added to water does not increases its volume. This is because the space present between the atoms of water is occupied by the sugar molecules. Therefore, due to the intermolecular space between the water molecules, the it does not increase its volume.

b) A sponge can be compressed though it is a solid.

Ans → Sponge is a solid still it can be compressed as it has air spaces between them and air is filled in those air spaces. So when we compress the sponge the air is expelled out of those spaces and hence the sponge is compressed and when we release it, it attains it's initial position as the air is again filled in those spaces.

11) Explain by an activity to show that the particles of matter have space in between them. Draw labelled diagram in support of your answer.

Ans→ Take a glass of water, add sugar and stir. You will observe that there is no rise in the water level. This shows that particles of matter have spaces between them. When sugar is added to water, the sugar particles adjust themselves in the space between the water molecules. Hence we can say that particles of matter have space between them.



12) Show by an activity the particles of matter attract each other.

Ans→ Take an iron nail, a piece of chalk and a rubber band. Try breaking them by hammering, cutting or streching. It is more easier to break the chalk, less easier to break the rubber

hard and difficult to break the iron nail. This is because the particles in the iron nail are held together with greater force than in the rubber band or chalk.

13) What do you mean by mass? How does it differ from the weight of an object?

Ans→ The quantity of matter that a body contains is known as its mass. The measure of gravitational force acting on a body is weight.

14) What do you mean by intermolecular force of attraction? How does it vary with reference to solids and gases?

Ans→ The force of attraction between the particles or molecules of matter which holds them together is called intermolecular force of attraction. In solids, the intermolecular force of attraction is very high. So, they hold themselves together and therfore they are very hard. Gases have very low intermolecular force of attraction. Due to this, they can flow and we cannot touch them.

15) Expand LPG. Mention its use.

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Ans→ LPG is the short form of "Liquified Petroleum Gas". LPG Gas cylinders are used in cooking.

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