

Girls' High School And College Prayagraj

Worksheet 4

Session 2020 2021

Class 4 A to F

Subject: Science

Topic: States of Matter and Solutions.

Instructions: Parents kindly ensure that your child reads and understands the text and completes all the exercises pertaining to the topic.

Matter

Matter is anything that has mass and occupies space. All matter is made up of tiny particles. These particles are so small that we cannot see them with the naked eye. For example air is made up of particles of different gases such as oxygen, nitrogen and carbon-dioxide. Our bodies, the food we eat, the air we breathe, the water we drink are all examples of matter.

Solids, liquids and gases are the three states of matter. Solids are usually hard and have a fixed shape. Chair, table, chalk, coat, bottle, etc. are example of solids. The shape of solids can change when force is applied to it for eg.wet clay can be moulded into different shapes such as pots, pans, bricks and so on.

Some solids are hard and do not change their shape e.g. Phone, a table, a book etc. Wherever you keep it, it remains in the same shape. Solids do not flow.

Liquids

Liquids are substances in which the particles are not so closely packed. Unlike solids liquids have no fixed shape and can flow. They take the shape of the container in which they are poured into. Water, oil, milk are examples of liquids.

Since liquids flow, they are called fluids.

Gases

Gases are substances in which the particles are very loosely packed. As they have no fixed shape they occupy the entire space available to them. Gases flow easily and have no fixed shape or volume.

E.g. Air and smoke

STATES OF MATTER



EXERCISE 1: Tick the correct answers-

1.) Particles are very closely packed in:

- a) Liquids b) Solids c) Gases

2.) A state of matter that changes its shape according to the container:

- a) Gases b) Solids c) Liquids

3.) The example of gaseous state is:

- a) Chalk b) Milk c) Smoke

4.) The state of matter which cannot flow is:

- a) Solid b) Gas c) Liquid

5.) State of matter which has no fixed volume:

- a) Liquid b) Gas c) Solid

EXERCISE 2: Fill in the blank space in the table given below

Property	Solids	Liquids	Gases
Volume	_____	Fixed volume	_____
Shape	Fixed shape	Can change _____	No ____
Flow	_____	_____	Can flow very easily.

EXERCISE 3: Understand and learn the given short answers:-

Question 1) What is matter?

Answer 1) Matter is anything that has mass and occupies space.

Question 2) Name the three states of matter.

Answer 2) Three states of matter are

- Solids

- Liquids
- Gases.

Question 3) Why are liquids called fluids?

Answer3) Liquids can flow hence they are called fluids.

Question 4) Why are solids hard?

Answer 4) Solids are hard as particles in a solid are packed very close together.

Question 5) Why do gases occupy the entire space available to them?

Answer 5) The particles in gases are very loosely packed thus they occupy the entire space available to them.

EXERCISE 4) Understand and learn the given questions and answers in detail:-

Question 1) Name the three states of matter with two examples of each.

Answer1) According to arrangement of particles matter can be categorized into three states. They are

- Solid for e.g. chair, torch.
- Liquids for e.g. milk, juice.
- Gases for e.g. Smoke, Nitrogen.

Question 2) Give three differences between solids, liquids and gases.

Answer 2) The three differences between solids, liquids and gases are:-

SOLIDS	LIQUIDS	GASES
Solids are hard	Liquids are not hard.	Gases are not hard at all.
Solids have a definite shape.	Liquids have no definite shape. They take the shape of the container in which they are kept.	Gases have no shape at all.
Solids cannot flow.	Liquids can flow.	Gases flow everywhere.

Question 3) Why does the smell of perfume spread across the whole room?

Answer 3) The molecules of gases are very loosely packed. When perfume is sprayed in a room the particles occupy the whole space available to them and spread out everywhere. Thus, we can smell the perfume across the whole room.

Question 4) Identify the shapes according to the states of matter.

- a) ice cube b) hot tea c) water

Answer 4 a) The ice cube is solid.

b) The hot tea is gas and

c) The water is liquid state.



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