

Grade 4 States of matter Book Exercise

Checkpoints

Write true or false and correct the false statement.

1. Solids have a definite volume, but no definite shape. **False**

Ans: Solids have a definite volume and a definite shape

2. Molecules in gases are closely packed. **False**

Ans: Molecules in gases are loosely packed

3. Ice changes to water on heating. **True**

4. Water vapour changes to water on cooling. **True**

A. Tick the correct answer

1. This has a definite volume but no definite shape.

a) apple b) **water** c) brick d) air

2. Molecules are closely packed in this state of matter.

a) **solid** b) Liquid c) gas d) none of the above

3. This can glow easily.

a) book b) stone c) **water** d) table

4. This is a process by which a liquid changes to its solid form.

a) evaporation b) condensation c) melting d) **freezing**

5. This is soluble in water

a) chalk b) **Salt** c) sand d) rice

B. Circle the odd one out

1. Plant animal **light** water

2. **Molecules** Stone book sugar

3. Solid **matter** liquid gas

4. **Ice** juice ink milk

5. Melting evaporation **solution** freezing

C. Name the following

1. Tiny particles that form a substance. **Molecules**

2. They have molecules far apart from each other. **Gas**
3. This form of matter does not have a definite shape or a definite volume. **Gas**
4. A solid that dissolves in a liquid. **Solute**

D. Write short answers

1. What is matter?

Ans: Anything that has mass and occupy space is called matter.

2. How can we say that air is matter?

Ans: Air has mass and occupy space. So, air is a matter.

3. What are molecules?

Ans: Molecules are tiny particles which form matter.

4. How is evaporation different from condensation?

Ans: Evaporation is the process by which a liquid changes to a gas. Condensation is the process by which a gas changes to a liquid.

5. Why are sugar crystals not visible when mixed in water?

Ans: Sugar crystals are not visible when mixed with water because the molecules of sugar occupied the empty space present between the molecules of water.

E. Answer these questions

1. What are the differences between solids and liquids?

Ans:

S.no	Solids	Liquids
1.	Solids have a definite shape and volume.	Liquids have a definite volume but no definite shape.
2.	It does not change its shape or volume.	But take the shape of the container into which they are poured.
3.	It does not change its shape or volume.	The molecules of liquid are not so closely packed.
4.	So they cannot move freely.	They can move and slide over each other.

2. Explain how water can change from one state to another.

Ans: Water can exist in three states liquid [water], Solid [ice] or vapour [steam]. Water changes its state when we heat or cool water . Ice changes to water on heating. Water changes to water vapour on further heating. Water vapour changes to water on cooling. Water changes to ice on cooling.

3. We can make different things from aluminium. Why?

Ans: Many metals can melt. So, they can be shaped into different things. Aluminium is a metal which can melt. So, it can be shaped into different things such as utensils and wires.

4. Explain the difference between a solute, a solvent and a solution with the help of an example.

Ans: Take a glass of water. Put teaspoon of sugar in it and still well till you cannot see the sugar crystals. Taste the water. It tastes sweet. In this example, sugar is a solute, water is a solvent and the Sweet water is a solution.

F.Complete Think and answer in your own words