

Give short answers:

1. How can we change the physical state of matter?

We can change the physical states of matter by heating and cooling them.

2. How do liquids differ from gases?

- ❖ Liquids differ from gases because particles are closely packed in liquids but loosely packed in gases.
- ❖ Liquids have fix volume but gases do not.

3. How do solids differ from liquids with regard to particle arrangement?

In solids, particles have an orderly arrangement and are tightly packed together. While in liquids, the particles are present very close to one another but they are not regularly arranged.

4. A liquid on cooling is converted into its solid state. What will happen to a solid when it is cooled?

On cooling a solid decreases its motion of particles. Decrease in motion of particles allows them to bring close together due to force of attraction.

5. Write down the names of five liquids and five gases which you know.

Liquid: Water, Oil, Milk, Vinegar, Petrol.

Gases: Oxygen, Nitrogen, Hydrogen, Carbon Dioxide, Helium.

Give answers in detail:

1. Explain the use of the following processes in daily life:

- | | |
|---------------------|---|
| Freezing | ❖ To preserve food items like fruits, vegetables, meat, dairy products etc. |
| | ❖ Make ice cubes to chill our drinks. |
| Boiling | ❖ To cook food items like rice, pasta, vegetables and meat. |
| | ❖ Produce steam to generate electricity. |
| Evaporation | ❖ To dry our clothes, hair and wet items. |
| Condensation | ❖ In air conditioning systems. |
| Melting | ❖ To cook food items like chocolate, butter and cheese. |
| | ❖ To shape and mold metals. |

2. Why do solids have fixed volume and fixed shape?

Solids have fixed shape and volume because their particles are held together by strong intermolecular forces. They do not move freely that is why they have fix shape and volume.

3. Why do solids not flow like liquids and gases?

Solids do not flow like liquids and gases because their particles are tightly packed together and have strong bonds that keep them in fixed positions. Whereas liquids and gases have particles that can move past each other, allowing them to flow and change shape easily.

4. What is diffusion? Explain with the help of examples.

The movement of particles from an area where they are more to an area where they are less is called diffusion of particles.

For example, movement of body spray particles in a room.

5. What is sublimation? Explain with the help of examples.

When a solid changes into a gas without becoming a liquid first. This process is called sublimation.

For example, conversion of solid carbon dioxide dry ice into gaseous carbon dioxide.

Write C against correct and I against incorrect statement in the middle column. Also correct the incorrect statement and write it in the next column.

Correct / incorrect	C/I	Correct statement
Particles in solids are strongly packed with each other giving definite shape and definite volume to solid objects.	C	
Particles in a liquid have definite shape but no definite volume.	I	Particles in a liquid have definite volume but no definite shape .
Gases have neither definite shape nor definite volume.	C	
The distance between the particles of liquids are greater than that between the particles of gases.	I	The distance between the particles of liquids are lesser than that between the particles of gases.

1. Multiple choice questions:

2. There are stronger forces of attraction between the particles:

- a. Solids b. Liquids c. Gases d. All of these

3. Solid and liquid objects cannot be compressed easily as their particles are:

- a. Closely packed b. Loosely packed c. Lacking spaces among them d. Scattered irregularly

4. The process of changing gas into liquid:

- a. Melting b. Evaporation c. Freezing d. Condensation

5. Changing of substance directly from solid state to gaseous state on heating is termed as:

- a. Boiling b. Sublimation c. Melting d. Diffusion

6. Material that don't take the shape of the container:

- a. Solids b. Liquids c. Gases d. All of these

7. When a gas condenses, it becomes a:

- a. Solid b. Liquid c. Crystal d. Another gas

8. When a solid object is heated, its particles begin to:

- a. Vibrate fast b. Vibrate slowly c. Stop vibrating d. Move freely

9. Boiling point of water is:

- a. 0° C b. 0° F c. 100° C d. 100° F

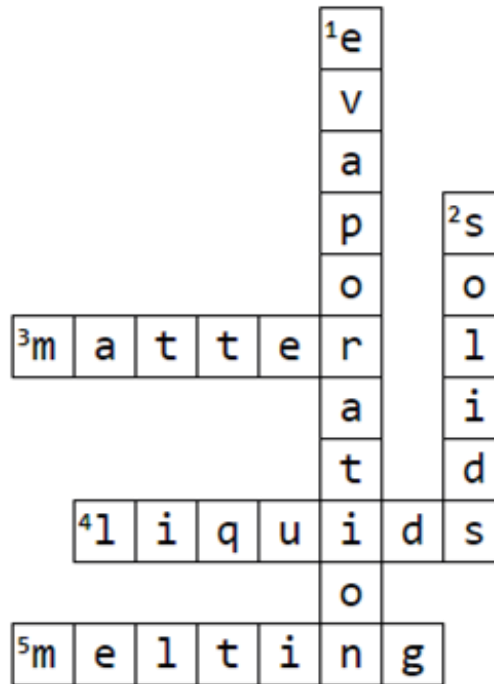
10. Movement of particles from an area where they are more to an area where they are less:

- a. Boiling b. Evaporation c. Diffusion d. Sublimation

11. Which of the following is opposite to boiling?

- a. Evaporation b. Freezing c. Melting d. Condensation

2. Crosswords



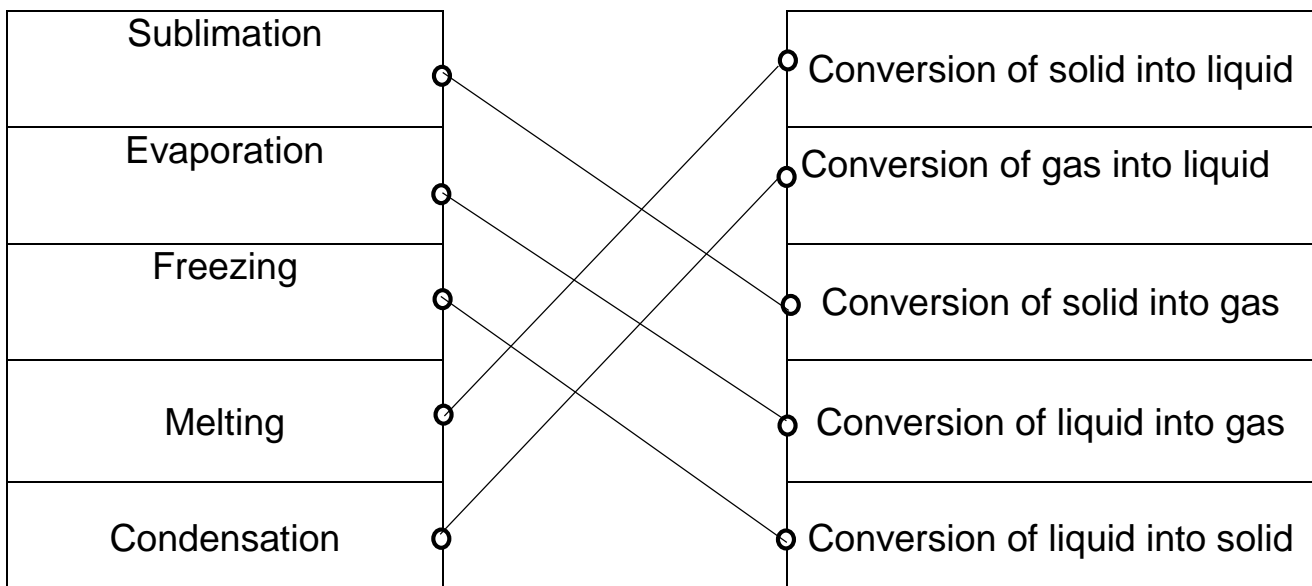
Across

3. Made up of particles
4. Do not have fixed shape
5. Conversion of solid into liquid

Down

1. Conversion of liquid into gas
2. Particles are tightly packed together

3. Columns



4. Words Search

Find the following word in the words search.

EXISTENCE	DENSITY	COMPRESSION	MOVEMENT
FORMATION	CONVERSION	POURED	SUBSTANCES

E	Q	W	E	R	D	T	Y	U	I	O	P	S
X	A	S	D	F	E	G	C	H	T	J	K	U
I	L	Z	X	C	N	V	O	B	N	N	M	B
S	Q	W	R	T	S	Y	N	U	E	I	O	S
T	L	K	J	H	I	G	V	F	M	D	S	T
E	M	N	B	V	T	C	E	P	E	O	I	A
N	P	U	Y	T	Y	R	R	E	V	W	Q	N
C	O	M	P	R	E	S	S	I	O	N	P	C
E	U	L	K	J	H	G	I	F	M	D	S	E
A	R	M	N	B	V	C	O	P	X	Z	Q	S
A	E	S	D	F	G	H	N	J	K	K	L	M
N	D	F	O	R	M	A	T	I	O	N	V	C

5. Jumbled Words

- | | | | |
|------------------|--------------------|----------------|-------------------|
| i. selcitrp | <u>Particles</u> | ii. rianoecnt | <u>Container</u> |
| iii. rnrgaaecf | <u>Fragrance</u> | iv. etialceclr | <u>Electrical</u> |
| v. inwbonra | <u>Brownian</u> | vi. sffniiduo | <u>Diffusion</u> |
| vii. itrdcieno | <u>Direction</u> | viii. rtiomsue | <u>Moisture</u> |
| ix. bulmatsition | <u>Sublimation</u> | x. tingmel | <u>Melting</u> |

6. Fill in the blanks using the given words.

Solid	condensation	Matter	diffusion	Solid
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- i. Any substance that has mass and occupies space is called matter.
- ii. In solid, particles vibrate at their mean position.
- iii. The state of matter which has fixed shape and volume is called solid.
- iv. When a substance changes from a gaseous to a liquid state directly, the process is called condensation.
- v. Mixing of ink in water is an example of diffusion.









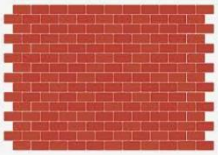

7. Write “T” for the true and “F” for the false statement.

- 1. Liquid has lesser density than solids.
- 2. Particles vibrate at their position in gas.
- 3. All matter is made up of small particles called atoms.
- 4. The process of changing a liquid into a solid is called freezing.
- 5. Robert brown was a chemist who observed changes in a chemical reactions.

T
F
T
T
F

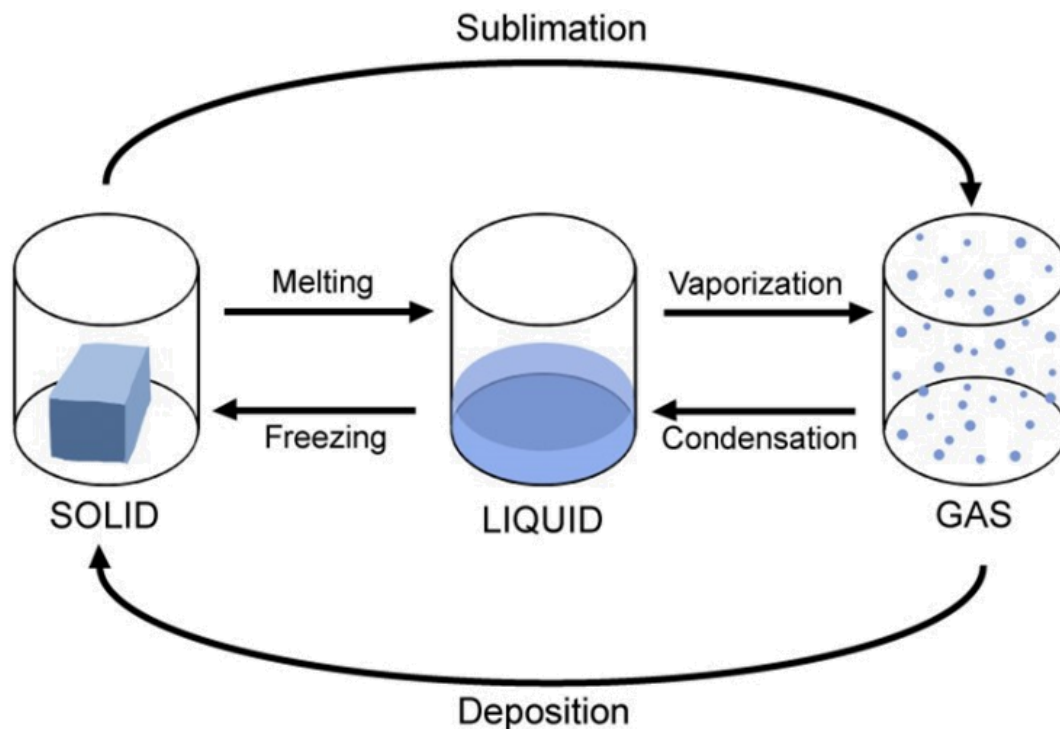
8. Drag and Drop

Look at the pictures and write their names in the relevant column.

				
Juice	Brick	Milk	Chair	Wood
				
Oil	Iron rods	Water	Wall	Blood

Solid	Liquid
Brick	Juice
Chair	Milk
Wood	Oil
Iron rods	Water
Wall	Blood

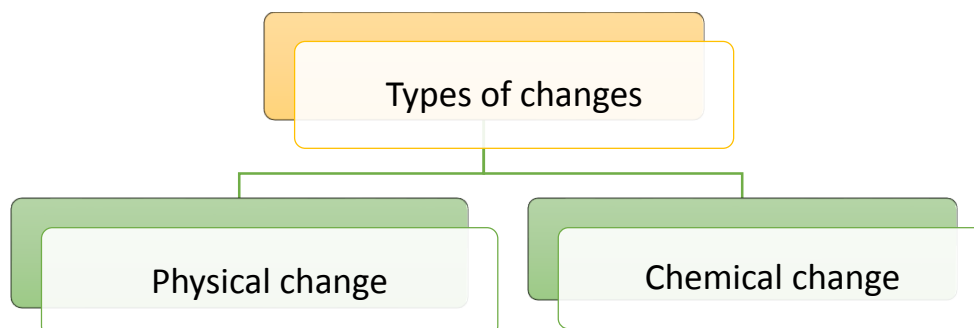
9. Label the diagram.



10. Comprehension

Answer the following questions after reading the paragraph carefully.

Generally, matter experiences two main types of changes: chemical change and physical change. In the process of physical change, there is no alteration in the natural identity of the matter, though the change in its state, size, and shape occurs. But chemical changes are irreversible and totally different substances are formed in them. Some common changes of matter include freezing, melting, condensation, vaporization etc.



1. How many types of changes occur in matter?

Ans: Generally, matter experiences two main types of changes: chemical change and physical change.

2. What do you know about chemical change?

Ans: Chemical changes are irreversible and totally different substances are formed in them.

3. Write the names of some changes of matter.

Ans: Some common changes of matter include freezing, melting, condensation, vaporization etc.