

حل تقييماٲ

سائنس
الصف الثاني الإعدادي

الأسبوع 1 و 2

أ/ ياسين سرور

Lesson (1)

States of matter

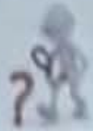
Weeks 1 2

Classroom performance

Date: / /



What state am I in? ?



Study the following figure , then answer :

1-Mention the name of each case? (1) Liquid

(2) Solid (3) Plasma (4) Gas

2- Which states of matter have a definite shape and volume? The Solid State.

3- Which states are spillable? The Liquid State

4- The state of matter that can spread The Liquid and Gaseous States.

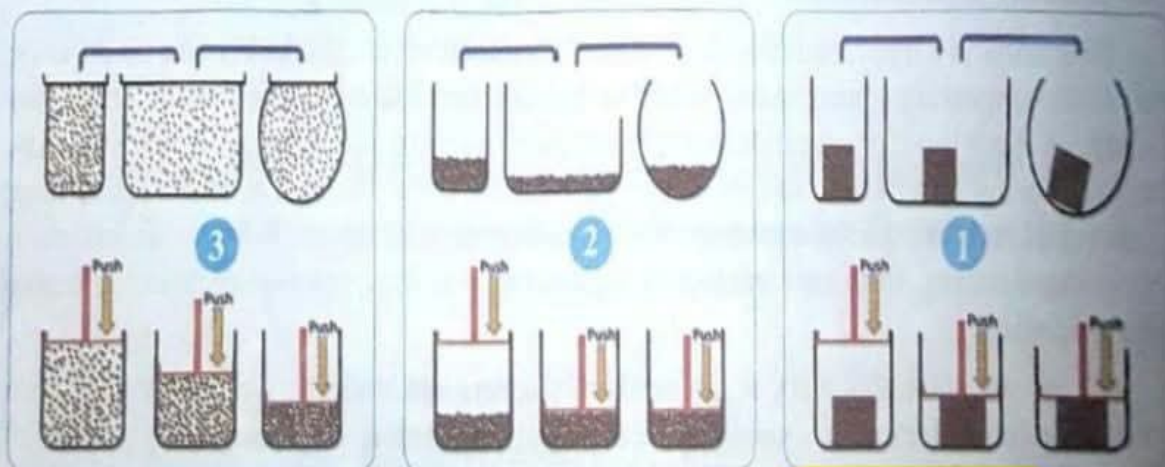
5- Matter can be compressed when it is in the state of .. Gas ...

6- Liquids and gases are called Fluids

Note and identify:

Matter properties

- Study the following figures, which illustrate the properties of matter states, then identify the numbers of the images and state of matter that represent each of the following:



1-Its shape does not change by changing the container .. The Solid State.

2- Its shape changes while its volume is constant . The Liquid State

3- Its shape and volume can be changed The Gaseous State

4-States of matters that can be compressed

The Gaseous State

5- States of matters that cannot be compressed

The Solid and Liquid States

6- From the opposite figure, the color of potassium

Permanganate powder spreads faster in **hot** water,

Giving reason?

Because increasing the temperature increases the rate of diffusion of the particles in the hot water.



Hot water cold water

Particle theory

Firstly:

Figure (1) represents the case of **the Plasma state**

Figure (2) represents the case of **the Liquid state**

Figure (3) represents the case of **the Gaseous state**

Figure (4) represents the case of **the Solid state**

Secondly:

- The interparticle spaces are as large as possible in the case of **Gaseous State** and this is attributed to **the weak attractive forces** between particles.

- The interparticle spaces are as small as possible in the case of **Solid State**, and this is attributed to **increased attractive forces** between particles.



- Using school book and based on what you have studied, explain the meaning of

Matter	Anything that has mass and occupies space.
Particles	Very small units that matter is made of and cannot be seen with the naked eye. They can be single-atom molecules or multi-atom molecules.
Particle theory	It is a theory that explains that matter is composed of very small, moving particles with spaces and attractive forces between them, and it explains much of the matter's behavior and properties.
Plasma	

It is the fourth state of matter, in which gases consist of a mixture of positively charged ions and negatively charged free electrons.



4- Because water is a liquid that can flow due to the weak attractive forces between its particles.

5- Because it is solid and the forces of attraction between particles are very strong.

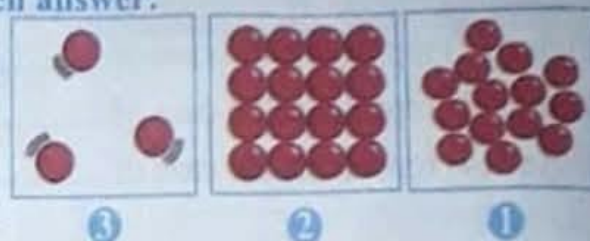
Home performance

-Answer the following: Temperature - Pressure - Attractive forces between particles.

- 1- What are the factors that determine the state of matter? Temperature - Mass - State of the Medium
- 2- What are the factors that determine the speed of diffusion in fluids?
- 3- Can you hold air? And why? No, because their particles are very far apart, and their diffusion is very high/easy.
- 4- Why does water spill out when you tilt a cup?
- 5- Why doesn't a sugar cube take the shape of the cup?

-Study the opposite figure well, and then answer:

- 1- Substance No. 3 can be compressed.
- 2- Substances.. 1 .. and.. 3 are called fluids.
- 3- Substance..... 2 ... retains a constant volume and shape
- 4- The most widespread substance is 3 because... its random motion and complete freedom in all directions.



Weekly assessment (1, 2)

Write down what the following sentences mean:

- 1- Everything that has mass and volume. Matter
- 2- A state of matter that has a definite shape and fixed volume. The Solid State
- 3- A state of matter that has the ability to spread and be compressed. The Gaseous State
- 4- The state of matter that has a fixed volume and varies in shape with the container that contains it. The Liquid State
- 5- A theory that explains the behavior and properties of matter. The Particulate Theory of Matter
- 6- The movement of particles of matter in fluids is random in all directions. Brownian Motion
- 7- A state of matter that occurs when gases are ionized into positively and negatively charged ions. Plasma

Give scientific explanation for each of the following:

- 1- Solid matter has a fixed shape and a definite volume.
- 2- Gaseous matter has no fixed shape and no definite volume.



- 3- Liquid matter is flowable.
- 4- Gases are compressible.
- 5- Particles of matter spread faster in gases than in liquids.
- 6- Plasma is used in air conditioners.
- 7- It is difficult to break a piece of rock.
- 8- The possibility of dissolving a quantity of table salt in water.
- 9- Spreading of smoke produces from a candle wick in the air.

Lesson (2)

Changes in the state of matter

Weeks 3 4

Classroom performance

Date: / /

Change in the physical state of a substance: **FOCUS**

- Look at the figure in front of you and complete the following:

- 1- Matter changes from one state to another

As shown in the figure, either by or

- 2- When particles of matter acquire energy the Kinetic energy of particles increases, and the forces of attraction between them increases and the distances Increases, so it transforms into or state.

- 3- When the particles of matter lose the energy of the particles decreases, and become closer to each other, the attraction forces between them increase, and changes to a liquid or solid state.

- 4- At normal atmospheric pressure, melting point of ice = ..., while boiling point of water = ...
- 5- The process of is the opposite of the process of and the process of freezing is the opposite of the process of
- 6- The processes of and occur with a loss of heat energy, while the processes of and occur with a gain of heat energy.

Gas



Liquid



Solid



Give a reason for each of the following:

1_ Because the attractive forces between its particles are very strong, and the intermolecular spaces between them are very small.

2_ Because the attractive forces between its particles are very weak, and the intermolecular spaces between them are very large.

3_ Because the attractive forces between its particles are weak, which allows the particles to slide past each other.

4_ Because the intermolecular spaces between their particles are very large.

5_ Because the attractive forces between particles in gases are very weak, while they are relatively weak in liquids.

And gas particles move freely and randomly in all directions, while liquid particles only slide past each other.

6_ To improve the quality of air in enclosed spaces.

7_ Because the attractive forces between the solid iron particles are very strong, and the intermolecular spaces between them are very small, which makes its particles tightly bound to each other.

8_ Because the attractive forces between the water particles are relatively weak, allowing the salt particles to diffuse between them.

9_ Because the attractive forces between the air particles are weak, and the intermolecular spaces between them are large, allowing the smoke particles to spread.