SCIENCE

SOLIDS, LIQUIDS AND GASES

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1. **What is matter? What is matter made up of?**

   Ans: Any substance that has mass and weight is called matter. Matter is made up of very small particles.

2. **Name the three states of matter.**

   Ans: The three states of matter are solid, liquid and gas.

3. **Can the states of matter change from one state to another? Give one example**

   Ans: Yes, the states of matter can change from one state to the other. One example to explain matter changing from one state to the other would be ice which is solid changes to water, which is a liquid and water further changing into water vapour, which is a gas.

4. **What is Evaporation? Explain with an example?**

   Ans: Changing a liquid into its gaseous form is called Evaporation. For example, on heating water, it changes into its gaseous form called water vapour.

5. **What happens to the particles of water when heated?**

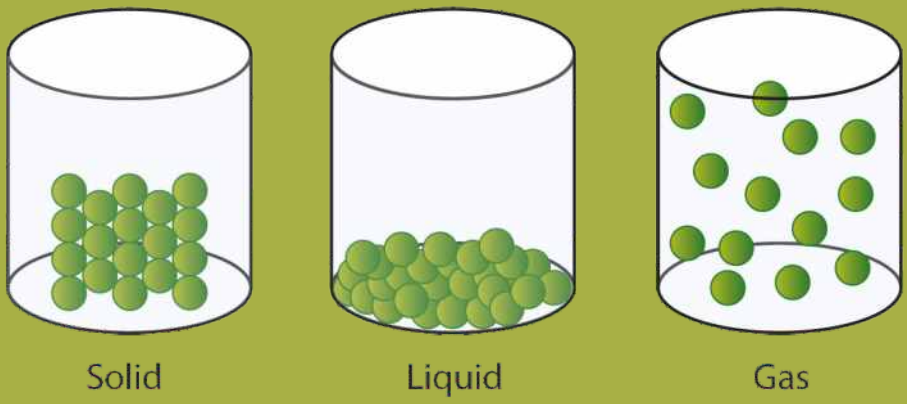
   Ans: When water is heated, the particles of water start vibrating quickly. The more the heat, the faster is the vibration of the particles. Finally the particles break free from the arrangement and the water changes into water vapour, which is its gaseous form.

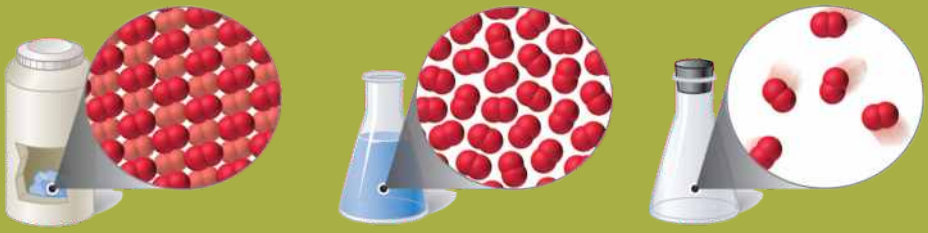
6. **What is condensation? Explain with an example.**

   Ans: Changing of gas into a liquid is called condensation. For example, water vapour condenses into its liquid state which is water, on coming in contact with a cool surface.

7. **What happens to the particles of when a substance is cooled?**

   Ans: Cooling of a substance slows down the movement of the particles. They become less free to move forming a liquid.





(a) $O_2(s)$ (b) $O_2(l)$ (c) $O_2(g)$

8. What is melting? Explain with an example.

Ans: Changing of a solid into a liquid is called melting. For example, ice gradually melts into water when kept at room temperature or taken out from the refrigerator.

9. Why does a substance melt?

Ans: A substance that is kept at room temperature melts, such as ice melting to water. The particles of the ice start to vibrate faster where the particles break away from the previous structure and soon the ice changes into liquid.

10. What is freezing? Explain with an example.

Ans: Changing of a liquid into its solid form is called freezing. When water is cooled, in the freezer, it changes into ice. When freezing occurs, the movement of the particles in a liquid slows down and they form a rigid platform eventually forming ice.

11. What is expansion? Why do substances expand? Give an example

Ans: The increase in the size of matter on heating is called expansion. When a substance is heated, the particles start to vibrate violently. Each particle takes up more space and eventually causes the substance to expand. Thus, a metal lid of a container opens easily when dipped in hot water. The heat of the water makes the metal lid expand and enables it to get opened easily.

12. What is contraction? Why do substances contract? Give an example

Ans: The decrease in the size of matter on cooling is called contraction. When a substance is cooled, the movement of the particles slows down. Thus each particle now takes up less space and the substance contracts. Some substances contract while kept in the refrigerator because of the cold temperature inside the refrigerator.