THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

Matter in Our Surroundings

Grade IX

Question Bank

Answer the following questions

1. What is matter?
2. Which of the following are matter?
   Chair, air, love, smell, hate, almonds, thought, cold, lemon water, smell of perfume.

3. Give reasons for the following observation:
   The smell of hot sizzling food reaches you several metres away, but to get the smell from cold food you have to go close.

4. A diver is able to cut through water in a swimming pool. Which property of matter does this observation show?
5. What are the characteristics of the particles of matter?
6. The mass per unit volume of a substance is called density. (density = mass/volume). Arrange the following in order of increasing density – air, exhaust from chimneys, honey, water, chalk, cotton and iron.
7. (a) Tabulate the differences in the characterisitcs of states of matter. (b) Comment upon the following: rigidity, compressibility, fluidity, filling a gas container, shape, kinetic energy and density.
8. Give reasons
   (a) A gas fills completely the vessel in which it is kept.
   (b) A gas exerts pressure on the walls of the container.
   (c) A wooden table should be called a solid.
   (d) We can easily move our hand in air but to do the same through a solid block of wood we need a karate expert.
9. Liquids generally have lower density as compared to solids. But you must have observed that ice floats on water. Find out why.
10. Convert the following temperature to celsius scale: a. 300 K b. 573 K 2. What is the physical state of water at:
    a. 250°C b. 100°C
11. For any substance, why does the temperature remain constant during the change of state?
12. Suggest a method to liquefy atmospheric gases.
13. Why does a desert cooler cool better on a hot dry day?
14. How does the water kept in an earthen pot (matka) become cool during summer?
15. Why does our palm feel cold when we put some acetone or petrol or perfume on it? 4. Why are we able to sip hot tea or milk faster from a saucer rather than a cup?
16. What type of clothes should we wear in summer?
17. Arrange the following substances in increasing order of forces of attraction between the particles— water, sugar, oxygen.

18. Give two reasons to justify—
    (a) water at room temperature is a liquid.
    (b) an iron almirah is a solid at room temperature.
19. Why is ice at 273 K more effective in cooling than water at the same temperature? 8. What produces more severe burns, boiling water or steam?
20. Name two processes which provide the best evidence for the motion of particles in matter.
21. Which single term is used to describe the mixing of copper sulphate and water kept in a beaker, on its own ?
22. When sugar is dissolved in water, there is no increase in the volume. Which characteristic of matter is illustrated by this observation ?
23. Even two or three crystals of potassium permanganate can impart colour to a very large volume of water. Which characteristic of particles of matter is illustrated by this observation?
24. When an incense stick (agarbatti) is lighted in one corner of a room, its fragrance spreads in the whole room quickly. Which characteristic of the particles of matter is illustrated by this observation ?
25. A piece of chalk can be broken into small particles by hammering but a piece of iron cannot be broken into small particles by hammering. Which characteristic of the particles of matter is illustrated by these observations ?
26. Name the process by which a drop of ink spreads in a beaker of water.