

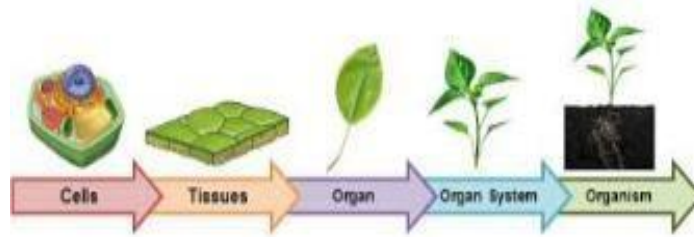


SAINIK SCHOOL CHANDRAPUR
MINISTRY OF DEFENSE
Holiday Homework Summer break 2024-25
Class IX

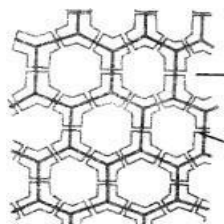


Organization in the Living World

1. A few layers of cells beneath the epidermis are generally simple permanent tissue. Parenchyma is the most common simple permanent tissue. It consists of relatively unspecialized cells with thin cell walls. They are living cells. Collenchyma allows bending of various parts of the plant-like tendrils and stems of climbers without breaking. Sclerenchyma tissue makes the plant hard and stiff. We have seen the husk of a coconut. It is made of sclerenchyma tissue. They are long and narrow as the walls are thickened due to lignin. The tissue is present in stems, around vascular bundles, in the veins of leaves and in the hard covering of seeds and nuts.



1. The flexibility in plants is due to
 1. Collenchyma
 2. Parenchyma
 3. Chlorenchyma
 4. Aerenchyma
2. Function of aerenchyma:
 1. It performs photosynthesis.
 2. It helps the aquatic plant to float.
 3. It provides mechanical support.
 4. none of these
3. Which of the following tissues has dead cells?
 1. Parenchyma
 2. Sclerenchyma
 3. Collenchyma
 4. Epithelial tissue
4. Which of the following statements is incorrect?
 1. Parenchyma tissues have intercellular spaces.
 2. Collenchyma tissues are irregularly thickened at corners.
 3. Apical and intercalary meristems are permanent tissues.
 4. Meristematic tissues, in their early stage, lack vacuoles and muscles.
 5. (I) and (II)
 6. (II) and (III)
 7. (III) and (I)
 8. Only (III)
5. Which of the following is the function of the tissue which is shown in the below diagram?



1. Transpiration.
2. Provides mechanical support.
3. Provides strength to the plant parts.

4. None of these
6. How will absence of any one of the cell organelles affect the cell's working?
7. Draw a neat diagram of plant cells and label any three parts which differentiate it from animal cells.
8. Explain the parts of microscope with well labelled diagram.
9. Draw neat, labelled diagram of animal cells. Explain the parts of animal cells in detail.
10. Where will you find a greater number of ribosomes-in cancer cells or in fat cells?
11. What is the difference in chromatin, chromosomes and gene?
12. How are messages conveyed from one place to another within the body?
13. How are plants and animals made of different types of tissue?

Matter - Its Nature and Behavior

1. Classify the following as chemical change (CC), chemical property (CP), physical change (PC), or physical property (PP).

- | | |
|---------------------------------|---------------------------|
| 1. _____ Heat conductivity | 8. _____ Combustible |
| 2. _____ Silver tarnishing | 9. _____ Water freezing |
| 3. _____ sublimation | 10. _____ Woodburning |
| 4. _____ magnetizing steel | 11. _____ Acid resistance |
| 5. _____ length of metal object | 12. _____ Brittleness |
| 6. _____ shortening melting | 13. _____ Milk souring |
| 7. _____ exploding dynamite | 14. _____ baking bread |

2. Classifying Matter Worksheet

Classify each of the following substances as an element, a compound, a solution, homogenous mixture or a heterogeneous mixture.

- | | | |
|----------------------------------|-------------------------------------|------------------|
| 1. Sand | 2. Salt | 3. Pure Water |
| 4. Soil | 5. Soda just opened | 6. Pure air |
| 7. Carbon Dioxide | 8. Gold | 9. Brass |
| 10. Oxygen | 11. Italian Salad Dressing | 12. Salt Water |
| 13. Raisin Bran | 14. Silver | 15. Lithium |
| 16. Apple Pie | 17. Kool-Aid | 18. Sugar |
| 19. Chocolate chip Cookie | 20. Gatorade | 21. Gold |
| 22. tacos | 23. Lead | 24. Ceasar salad |
| 25. Calcium | 26. Whole Milk | 27. Skim Milk |
| 28. hydrogen peroxide | 29. Potassium | 30. Sugar |
| 31. Raisin Bran Cereal with Milk | 32. Raisin Bran Cereal without Milk | |

3. Use the example below, make vocabulary cards for the following words on the bottom and back of this paper:

- Compound Mixture
- Pure Substance
- Element

Matter

Write the word in this square	Write the definition in this square
Use the word in a sentence in this square	Draw an illustration (picture) for the word in this square

Motion, Force and Work CALCULATING

PEED AND VELOCITY

Speed measures how fast or slow an object is moving. Velocity is a measure of speed in a specified direction. The units for both speed and velocity are both expressed as a specific distance travelled over a specific amount of time.

$$\text{Speed} = \frac{\text{distance}}{\text{time}}$$

$$\text{Velocity} = \frac{\text{distance}}{\text{time}} \text{ in a specific direction}$$

Provide the appropriate speed, velocity, distance, or time on each of the blanks below.

1. What is the velocity of a plane that travels 3,000 miles in 5.0 hours? _____
2. If John takes 45 minutes to bicycle a total of four kilometers to his grandmother's house, what is his velocity in km/hr.? _____
3. What is the speed of a car that takes 1.5 hours to travel 75 kilometers? _____
4. If it takes 3.5 hours for a train to travel between two cities at a velocity of 120 miles/hr., what is the distance between the two cities? _____
5. If a car is traveling at a velocity of 55 km/hr., how long would it take for the car to travel 200 kilometers? _____
6. The Amazon River flows at an average speed of 5 km/hr. If you and a friend decide to drift down the river on a raft, how long will it take to drift 16 kilometers? (Express the answer in hours and minutes) _____
7. If a plane travels North for 2.5 hours at a velocity of 100 km/hr, what distance did it travel?

8. If a girl is pedaling her bicycle at a velocity of 0.10 km/min East, how far will she travel in two hours? _____
9. Ants can carry food at a speed of 1 cm/s. How long will it take the ant to carry a cookie crumb 50 m from the kitchen table to the ant hill? (Express the answer three different ways; in seconds, minutes and hours) _____.
10. How many hours will it take a car to travel a distance of 750 km if it is traveling at 100 km/hr.? _____