

STEPPING STONE
SCHOOL (HIGH)

CLASS :7

Subject: Biology
Topic: Plant tissue

Date: 29/04/2020
Time Limit: 30 min

Worksheet No.:2

SIMPLE PERMANENT TISSUE

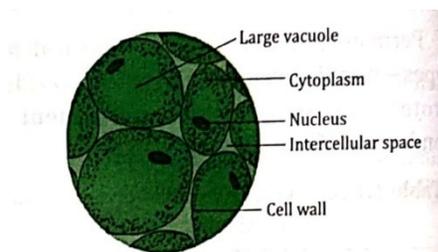


Fig. 1.3 Parenchyma tissue

(A)

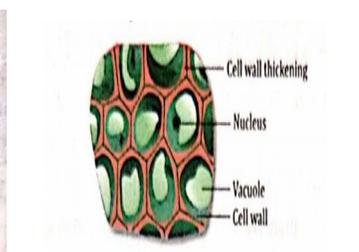
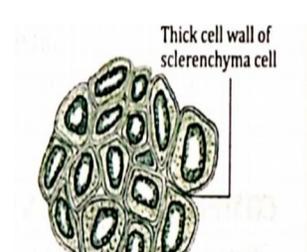


Fig. 1.4 Collenchyma tissue

(B)



(C)

(A) Parenchyma Tissue:-

- Structure:-**
- *This tissue is made up of thin-walled, living cells
 - *cell wall is made up of cellulose
 - *The cells are mostly round in shape with large intercellular spaces
 - *Each cell consists of a prominent nucleus with abundant cytoplasm
 - *Presence of a large vacuole.

Location:- Parenchyma tissue is found in soft parts of plant such as **cortex of roots**, **ground tissues** in stems and **mesophyll** tissue of leaves.

- Functions:-**
- *they store food
 - *Provide temporary support to the plant.
 - *If chloroplast is present, the tissue also performs photosynthesis and are then known as **chlorenchyma**

(B) Collenchyma Tissue

Structure: - *The cells are living and are circular, oval or polygonal in shape.
*Intercellular spaces are absent as the cells are thickened at the corners due to the deposition of **cellulose** and **pectin**.

Locations: - * This tissue is found in the form of bands in dicot stems, petioles of leaves and Flowers stalks.

Functions: - *Collenchyma cells provide mechanical strength and support to the growing parts of parts of plants.
*Sometimes the cells store food as prepared by the plants

(C) Sclerenchyma Tissue

Structure: - *The mature sclerenchyma cells do not have protoplasm and are usually **dead**
*The intercellular spaces are absent as the cell walls are thickened at the corners with **lignin**
*Simple pits are present in the walls of sclerenchyma cells.

Location: -Sclerenchyma tissues are found in hard, outer covering of nuts and seeds. They are also found in stems and veins of leaves.

Functions: -This tissue provide mechanical strength, rigidity and toughness to different parts of parts of the plant.

[Copy the questions and solve them on a sheet of paper date wise. Keep the worksheets ready in a file to be submitted on the opening day. Read the notes properly before answering the questions.]

- Q1) Which plant tissue provides both mechanical strength and flexibility to the plant?
- Q2)What chemical substance is deposited in the secretory wall of Sclerenchyma tissue?
- Q3)What are chlorenchyma tissue? Why are they called so?
- Q4)Write the location and function of the following tissues:-
a) Parenchyma tissue b)collenchyma tissue c) sclerenchyma tissue
- Q5) Differentiate between the following:-
parenchyma tissue and sclerenchyma tissue

