lab-2

The plant cell

Cell wall : is a strong and semi rigid structure that is giving strength and support to the plant body .

1- Primary wall : usually found in meristematic tissue ,collenchyma and parenchyma .

2- Secondary wall : found in cells of fibers vessels and tracheids and sclerenchyma tissue .

Living components of plant cell :

- Cytoplasmic ground
- Plastids
- Mitochondria
- Ribosomes
- Nucleus
- Plastids

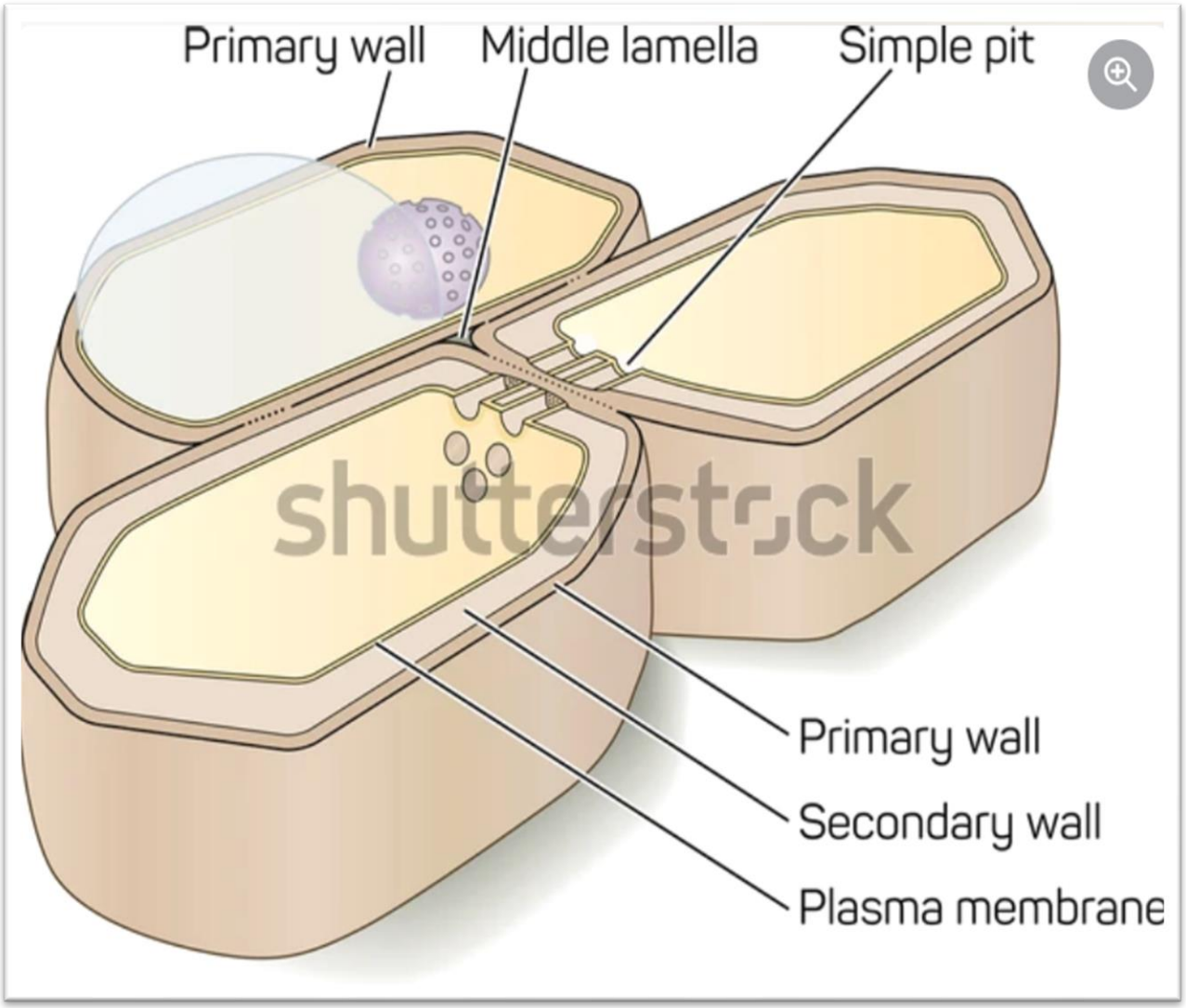
The plastids

There are three types of plastids :

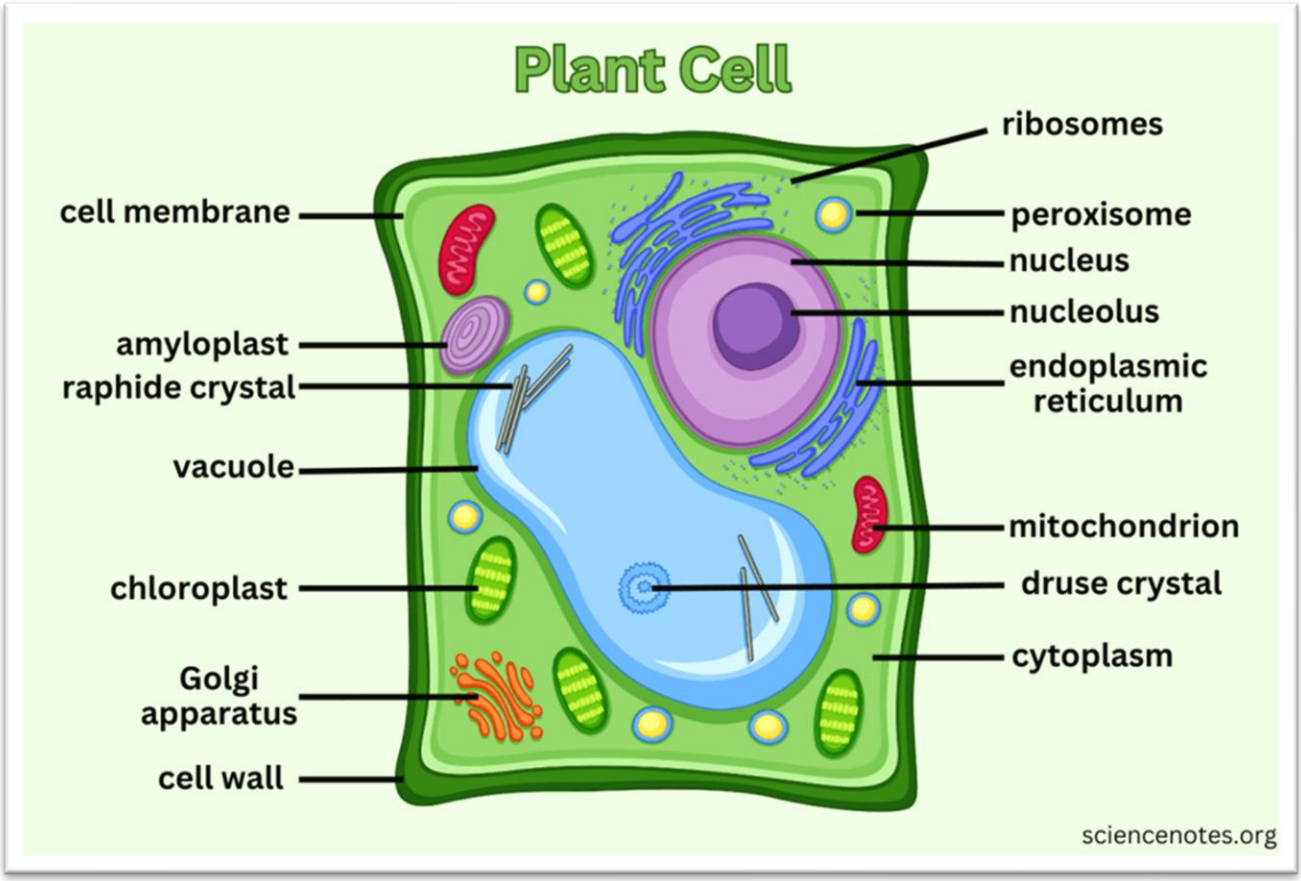
a – Chloroplasts : are specialized cytoplasmic bodies which contain chlorophyll pigment chl-a , chl-b .

b- Chromoplasts : yellowish or red cytoplasmic body containing carotene and xanthophylls .

c- Leucoplasts : color plastid involved in the formation starch in many types of plant cells .



Section in the cell wall



Components of plant cell

Plant tissues

Based on morphological and physiological features plant tissue can be divided into :.

1-Meristematic tissue (growth tissue)
2-Permanent tissue (matured tissue)

- Permanent tissue :

A- Simple permanent tissue :

Consisting chiefly of one type of cell like :
1- parenchyma tissue
2- Collenchyma tissue

3-Sclerenchyma tissue

4-Epidermis tissue

5-Cork tissue

B- Complex permanent tissue :

Consisting of several kinds of cells :

1-Xylem tissue .

2-Phloem tissue .

1- Parenchyma tissue :

1- One of the most common and most abundant plant tissue in all organs of higher plant .

2-Paranchyma cells are usually spherical , ovoid , or Cylindrical in shape with primary wall , inter cellular space .

2- Collenchyma tissue :

Cells of collenchyma are often long lived and have unevenly thickened in growing plant with primar7y wall but without inter cellular space .

3- Sclerenchyma tissue :

This tissue contain two type of cells (fibers and scleried) with thickened wall (secondary wall) .

4- Epidermis tissue :

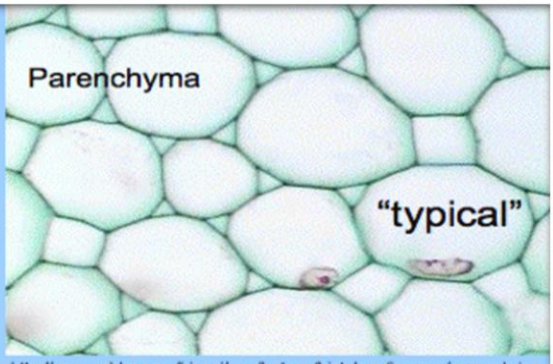
One type of thick cells form the surface layer of leaves , flower , young portion of stems and roots .

5- Cork tissue :

Lack protoplasm at maturity and that have suberin .

(Cork + dead phloem) rough outer bark of woody stems

Some Plant Cell Types



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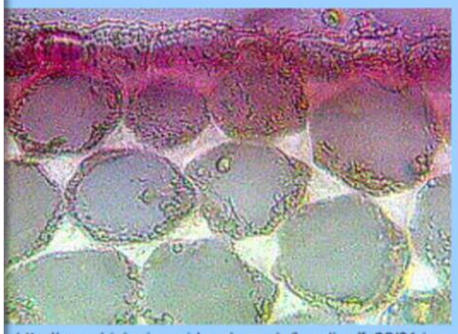

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Collenchyma