

Text n° 1 : Plant Cells

Plant cells are **eukaryotic cells**, they are enclosed by a plasma membrane and have a **nucleus** and other membrane-bound organelles. Plant cells have all the same structures as animal cells, plus some additional structures. Structures found in plant cells but not animal cells include a large central vacuole, cell wall, and plastids such as chloroplasts.

The large central vacuole is surrounded by its own membrane and contains water and dissolved substances. Its primary role is to maintain pressure against the inside of the cell wall, giving the cell shape and helping to support the plant.

The **cell wall** is located outside the cell membrane. It consists mainly of cellulose and may also contain lignin, which makes it more rigid. The cell wall shapes, supports, and protects the cell. It prevents the cell from absorbing too much water and bursting. It also keeps large, damaging molecules out of the **cell**.

Plastids are membrane-bound organelles with their own DNA. Examples are chloroplasts and chromoplasts. Chloroplasts contain the green pigment chlorophyll and carry out **photosynthesis**. Chromoplasts make and store other pigments. They give flower petals their bright colors.

There are three basic types of cells in most plants. The different types of plant cells have different structures and functions.

Parenchymal cells (ex : food storage tissues of potatoes) are cube-shaped, thin-walled, relatively unspecialized and contain chloroplasts. They perform various important functions such as photosynthesis, cellular respiration and storage.

Collenchymal cells (ex : strings running through a stalk of celery) are elongated irregularly thickened walls. This type of cells supports wind resistance.

Sclerenchymal cells (ex : tough fibers in jute (used to make rope) are very thick cell walls containing lignin. This type of cells support strength.

Questions :

Part one : Read the text and answer the questions

- 1-What is the main idea of the text ?
- 2- Describe parenchymal plant cells and state their functions.
- 3- Give the definition of the words in bold
- 4- Find words from the text which have the same meaning as following:
 - Fundamental.
 - Perform.

5- Find words in the text which mean the opposite of the following words :

- Similar.
- Weakness.

6- Summarize the text in few lines.

Part 2 : Write the following figure's caption and give it a title.

