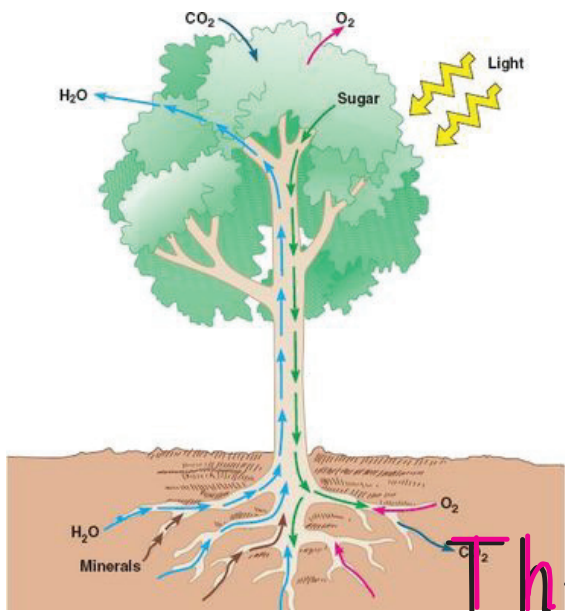




- Terrestrial plants lose water continuously by evaporation and have evolved mechanism for avoiding desiccation.
- Terrestrial plants have mechanism for moving water and minerals from the soil to the sites of photosynthesis and growth.

The Plant Cell

Rough endoplasmic reticulum :

is primarily concerned with the synthesis, folding and modification of proteins, especially those that need to be delivered to different organelles within the cell, or secreted from the cell. The rough ER is also involved in the response of the cell to unfolded proteins and plays a role in the induction of apoptosis, due to its close interaction with mitochondria.

Nucleus :

that contains the genetic information primarily responsible for regulating the metabolism, growth, and differentiation of cell.

● Nucleolus : that is the site of ribosome synthesis. That includes portions of one or more chromosomes where ribosomal RNA gene are clustered to form a structure called nucleolar organizer.

Mitochondria :

The cellular sites of respiration, a process in which the energy released from sugar metabolism is used for the synthesis of ATP from ADP and inorganic phosphate (Pi)

Chloroplast :

That is the site of photosynthesis in eukaryotic photosynthetic organisms.

Vacuole :

Within the vacuole is the cell sap, a water solution of salts and sugars kept at high concentration by the active transport of ions through permeases in the vacuole membrane.

Golgi body :

is responsible for transporting, modifying, and packaging proteins and lipids into vesicles for delivery to targeted destinations.

Middle lamella :

cells are glued to each other by a pectic polysaccharide rich material known as middle lamella. It plays a crucial role in maintaining the structural integrity of plant tissues and organs, as it prevents the cells from separating or sliding against each other.

Plasma membrane :

thin membrane that surrounds every living cell, delimiting the cell from the environment around it. Enclosed by this are the cell's constituents, often large, water-soluble, highly charged molecules such as proteins, nucleic acids, carbohydrates, and substances involved in cellular metabolism.

Primary cell wall :

is the cellulose-containing layer laid down by cells that are dividing and growing. To allow for cell wall expansion during growth, primary walls are thinner and less rigid than those of cells that have stopped growing.

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Page 2 of 2