# PLANT CELL STRUCTURE

The cell membrane, nucleus, cytoplasm, and everything in between.

**Nucleus**

Acts as the control center of the cell, housing DNA and coordinating activities like growth, metabolism, and reproduction.

**Ribosomes**

Consists of RNA and proteins. Sites of protein synthesis.

**Endoplasmic reticulum (ER)**

It is a network of branching tubules and flattened sacs scattered in the cytoplasm. It provide mechanical support to the cell.

**Rough Endoplasmic reticulum**

It has ribosomes attached to it and it creates protein.

**Smooth Endoplasmic reticulum**

It has no ribosomes attached and it synthesize lipid and detoxify chemicals.

**Mitochondria**

Mitochondria are double membrane bound organelle that plays a major role in energy generation. It produce cellular energy in the form of ATP. Hence, they are called 'power houses' of the cell.

**Chloroplast**

Contains chlorophyll and is surrounded by a double membrane. Site of photosynthesis, converting light energy into chemical energy (glucose).

**Golgi apparatus**

It is stacks of membrane-bound vesicles. It modifies, sorts, and packages proteins and lipids for storage or transport out of the cell.

**Cell wall**

It is the cell's outermost protecting covering. Provides structural support, protection, and shape to the cell.

**Cell membrane**

Found inside the cell wall. It controls the movement of substances in and out of the cell, maintaining homeostasis.

**Central vacuole**

A large central vacuole filled with cell sap. Maintains turgor pressure, stores nutrients and waste products, and helps in cell growth.

**Cytoplasm**

A jelly-like substance that fills the cell. It supports and suspends organelles and cellular molecules.

**Amyloplast**

It serves as starch storage for plants.

**Druse crystal**

It stores excess calcium, called calcium oxalate, in plants. High amounts of this calcium makes a plant poisonous to humans.

ADHYAYANTA LIVEWORKSHEETS