







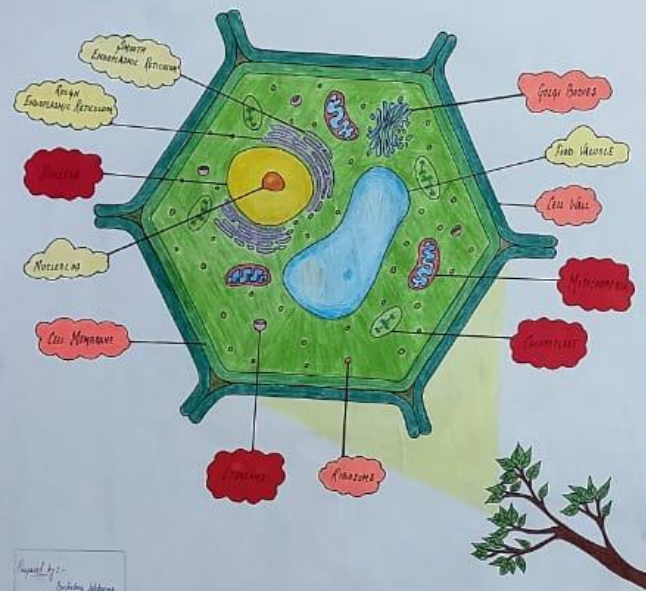








# PLANT CELL



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 Date:- 12/12/2021  
 (4th Semester)

# CELL ORGANELLES



**Nucleus** - It is spherical in shape and contains:  
 - Chromatin material (DNA and RNA)  
 - Nucleolus (dense spherical structure)  
 - Nuclear membrane (double layer)



**Chloroplast** - It is an organelle where photosynthesis takes place.  
 - It contains green pigment called chlorophyll.  
 - It is bounded by a double membrane.  
 - It has internal stacks of thylakoids called grana.



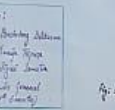
**Rough Endoplasmic Reticulum** - It is a network of flattened sacs called cisternae.  
 - It is studded with ribosomes.  
 - It is involved in protein synthesis and transport.



**Smooth Endoplasmic Reticulum** - It is a network of tubular structures.  
 - It is not studded with ribosomes.  
 - It is involved in lipid synthesis and transport.



**Vacuole** - It is a large, clear, spherical structure.  
 - It is bounded by a single membrane called tonoplast.  
 - It is involved in storage and maintaining cell turgor.



**Golgi Body** - It is a stack of flattened, curved sacs called cisternae.  
 - It is involved in the transport of materials from the ER to the cell membrane.



**Mitochondrion** - It is an oval structure with internal folds called cristae.  
 - It is the powerhouse of the cell, where energy is produced through cellular respiration.

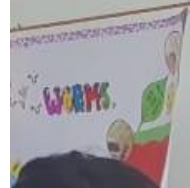


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