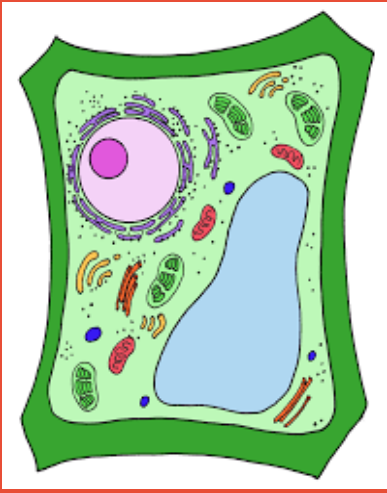
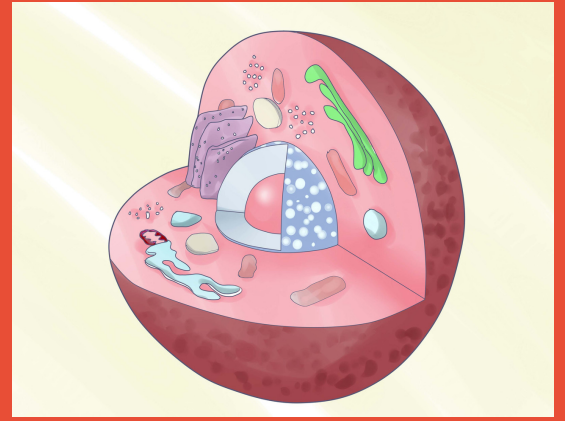


CELL STRUCTURE



Animal Cell



Plant Cell

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Joe Burtrum, April Cekosh, Jake Wade

NUCLEUS

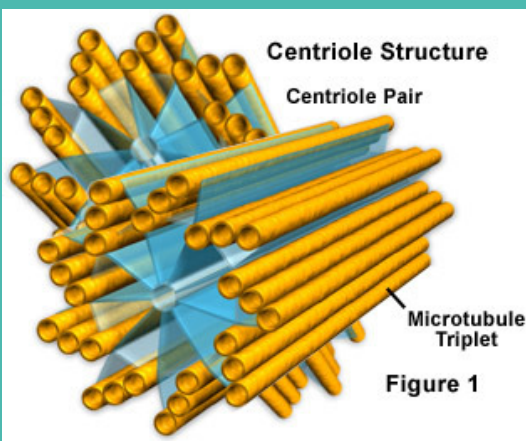
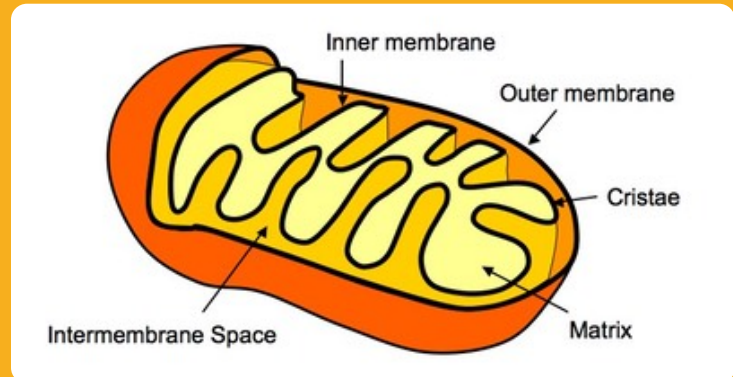
Controls the genetic (hereditary) material of the cell, DNA. It is normally spherical and between 10 and 20 μm in diameter. Contains a nuclear envelope, nuclear pores, chromatin, and the nucleolus. Found in both plant and animal cells.

CHOLOROPLASTS

Found in plant cells which photosynthesize. They are flat discs and are usually 3-10 μm in diameter and 1 μm thick. Made up of the chloroplast envelope, stroma, grana (contain thylakoids or lamelle), and starch grains.

MITOCHONDRIA

Found in both plant and animal cells. This is where the biochemical processes of respiration and energy production occur. Contains a double membrane, cristae, and the matrix, which makes up most of the mitochondria.



CENTRIOLES

Centrioles organize microtubules to form spindle fibers during nuclear division. Found in animals and plants. Made up of hollow cylinders made up of 9 sets of 3 microtubules.

CELL SURFACE MEMBRANE

Controls movement of substances in and out of the cell through a partially permeable membrane. Found in animals and plants. Has a large structure that can fold into microvilli to provide surface area.

CELL WALL

The cell wall provides strength to the cell and prevents it from bursting, it also allows water to pass along it. Only found in plants, consists of cellulose with a complex structure

ENDOPLASMIC RETICULUM

An elaborate, 3-D system of sheet-like membranes spreading through the cytoplasm of all cells. Rough ER - Has ribosomes present on outer surfaces of the membranes. Smooth ER - Lacks ribosomes on surfaces & is often more tubular in appearance. Functions range from synthesis (of proteins) to transporting mainly proteins)

RIBOSOMES

Small spherical structures found in all cells (animal, plant, pro/eukaryotic) 80S - Found in Eukaryotic cells (22nm) 70S - Found in Prokaryotic cells (17nm) Important in protein synthesis

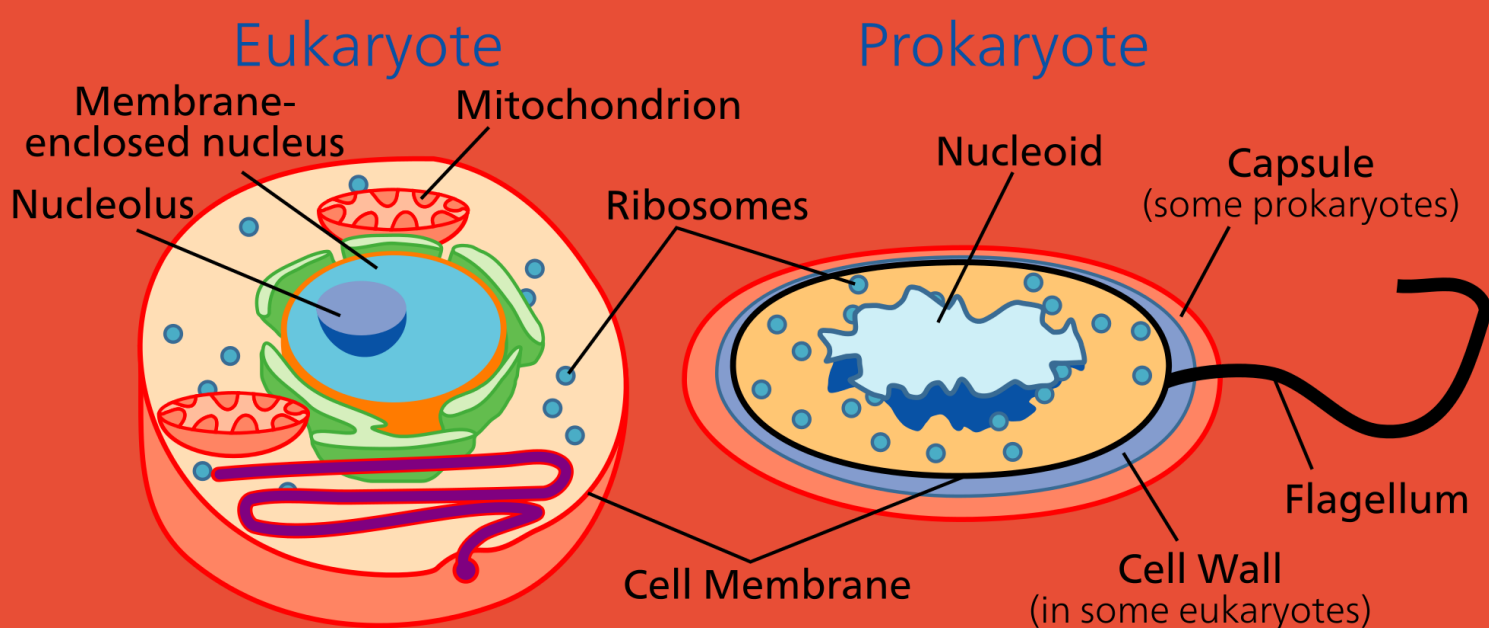
GOLGI BODY

AKA Golgi Apparatus found in all cells Similar to SER in structure - more compact Adds carbs to proteins to form glycoproteins Receives, sorts, processes, and delivers proteins and lipids Forms primary lysosomes

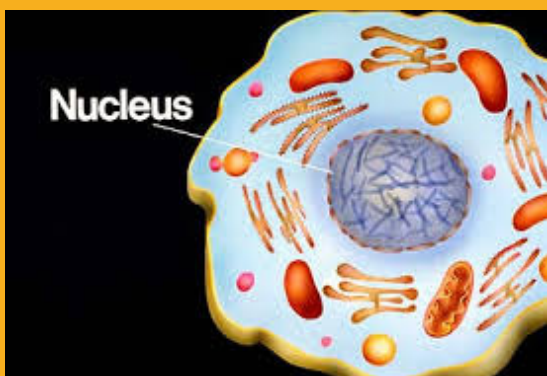
LYSOSOMES

Up to 1 μm in diameter Found in all cells Used to destroy foreign material inside or outside of the cell

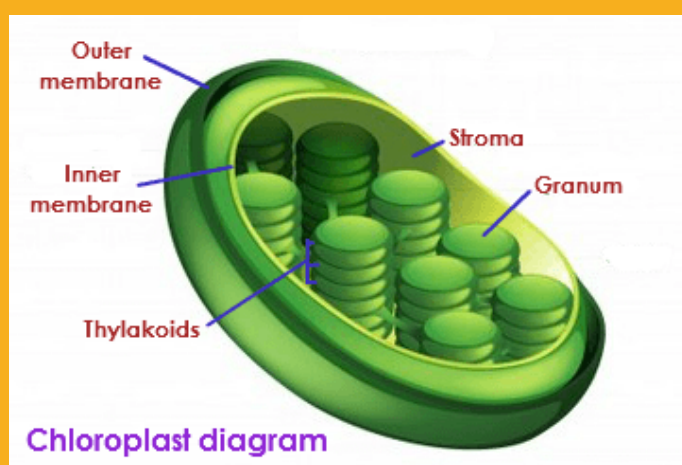
CELL STRUCTURE



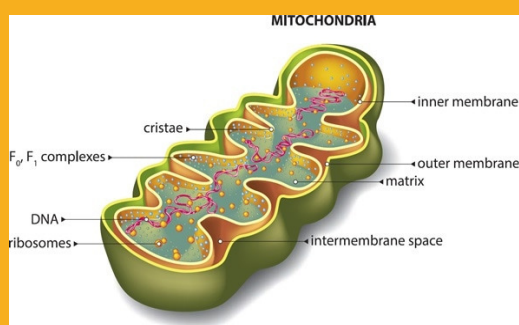
NUCLEUS



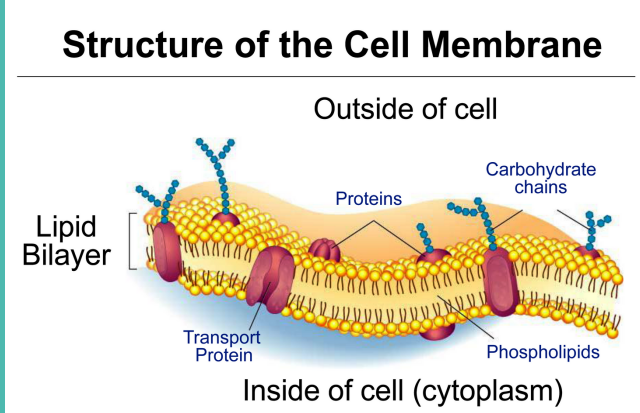
CHLOROPLAST



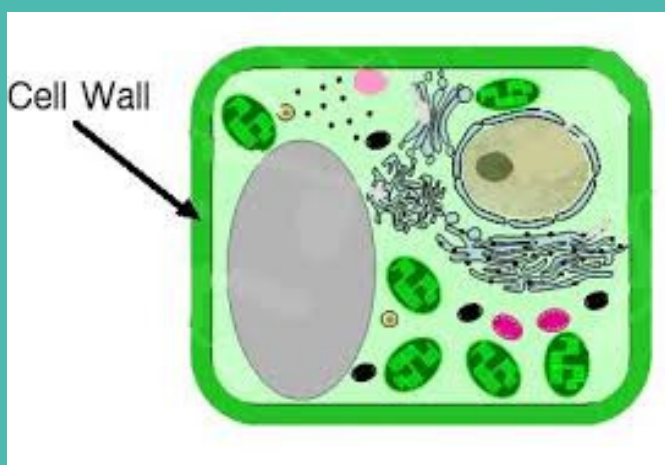
MITOCHONDRIA



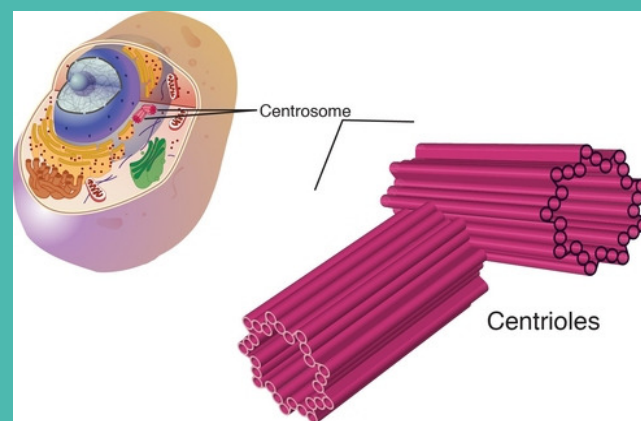
CELL SURFACE MEMBRANE



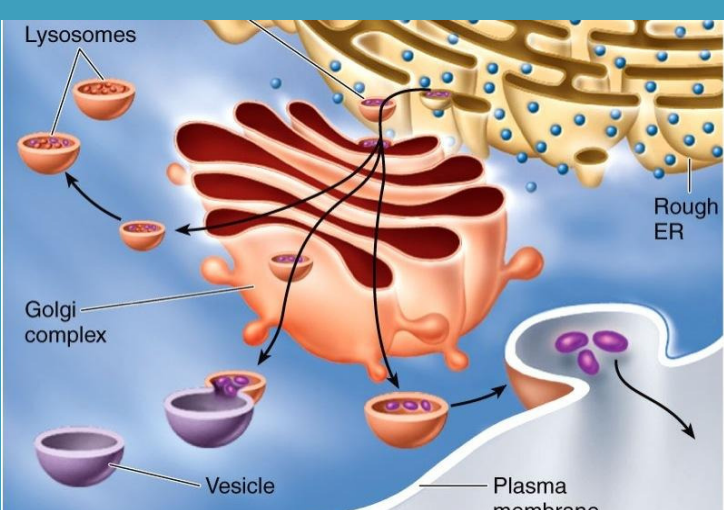
CELL WALL



CENTRIOLES



GOLGI BODY & LYSOSOMES



ENDOPLASMIC RETICULUM & RIBOSOMES

