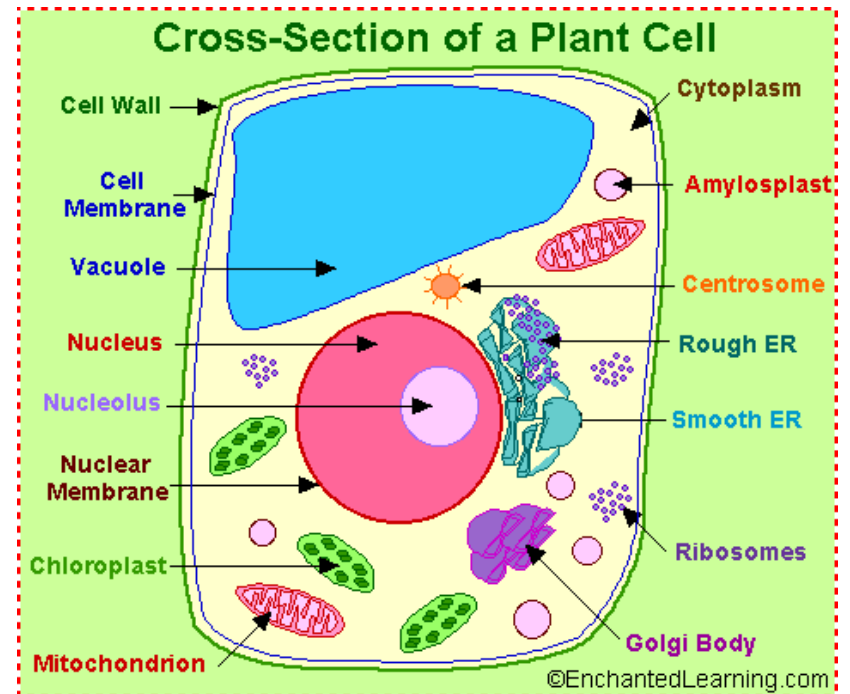
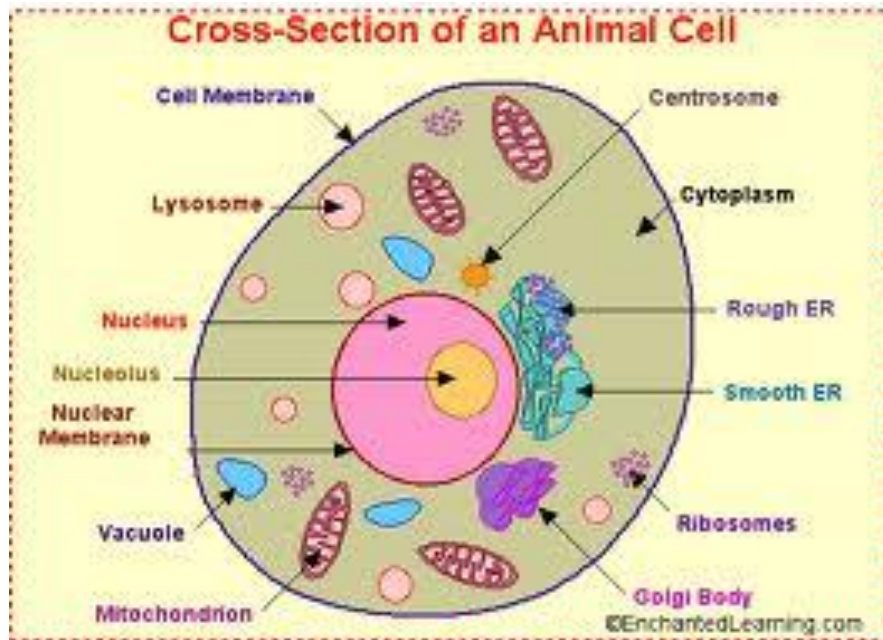
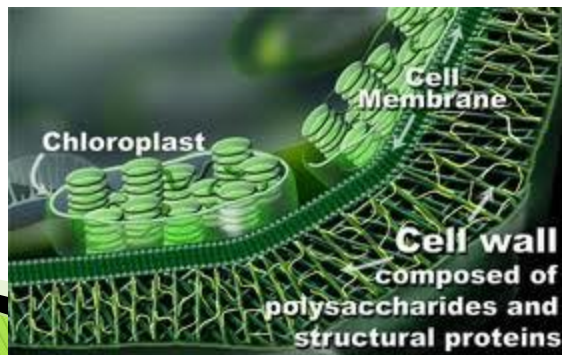


# STRUCTURE & FUNCTION OF CELLS

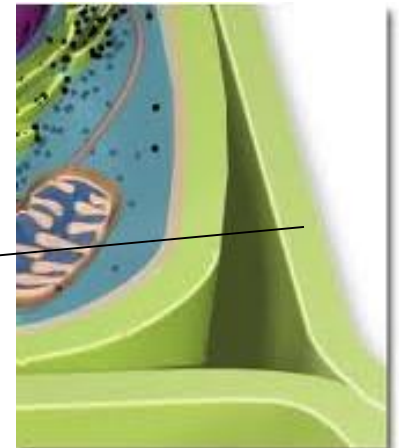


# Cell Wall

- Strong, stiff outer layer of a plant cell.
- Made of cellulose.
- Protects and supports the cell.
- Does allow water, oxygen, carbon dioxide and other dissolved materials to pass in and out of the cell.



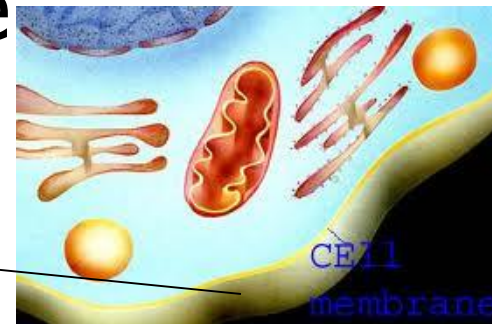
Cell wall



# Cell Membrane

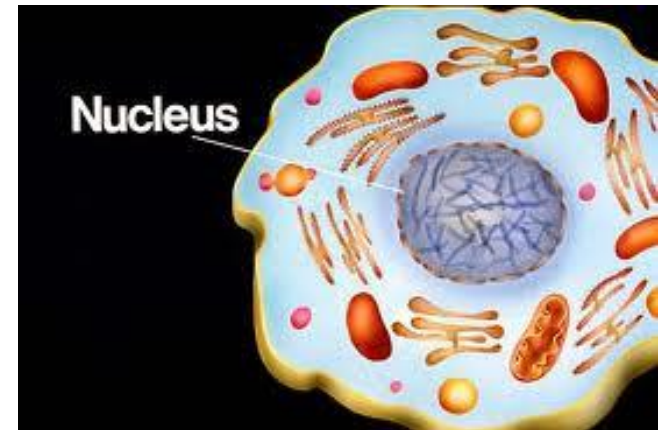
- Thin membrane that surrounds the cell.
- In plant cells, it is found just inside the cell wall.
- It is the outer covering of animal cells.
- Provides support and protection for the cell.
- Allows materials to pass in and out of the cell.
- Found in both animal and plant cells.
- Often called a plasma membrane

Cell membrane



# Nucleus

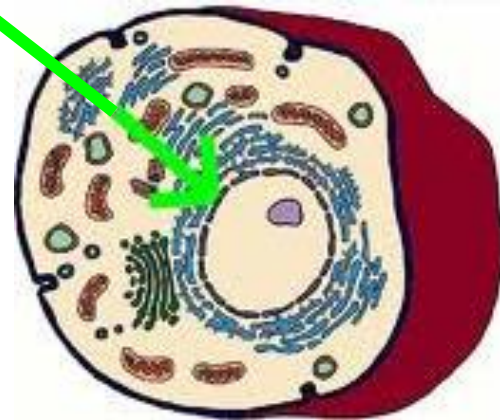
- A large, oval structure.
- Known as the control center of the cell.
- Acts as the “brain” of the cell by regulating or controlling all of the activities of the cell.
- Found in animal and plant cells.



# Nuclear Membrane

- Thin membrane that surrounds the nucleus.
- Allows materials to pass in and out of the nucleus.
- Found in both plant and animal cells.

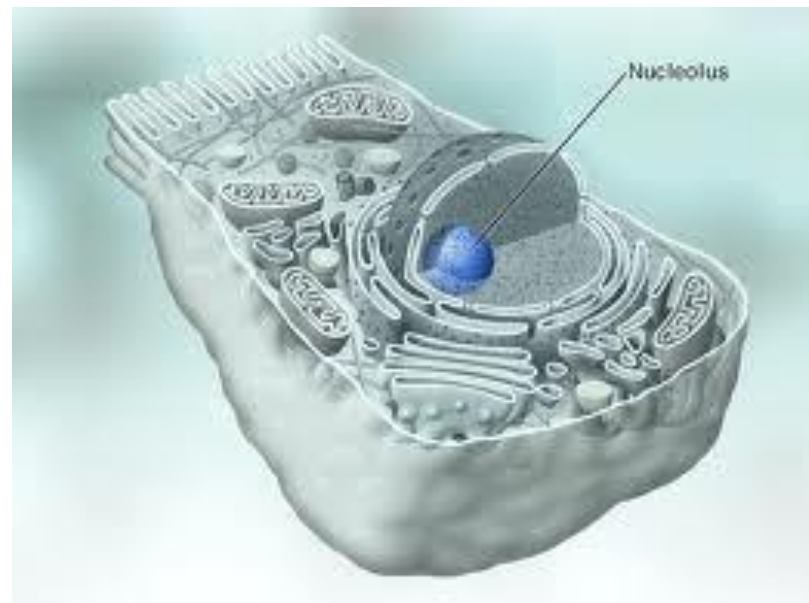
Nuclear  
membrane





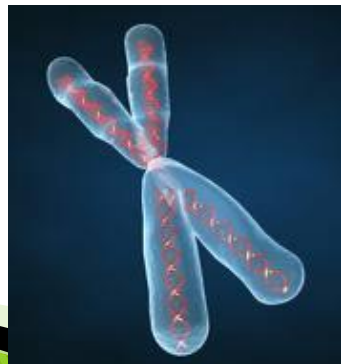
# Nucleolus

- A “little nucleus” inside the nucleus.
- Produces ribosomes which are involved in protein production.
- Found in plant and animal cells.

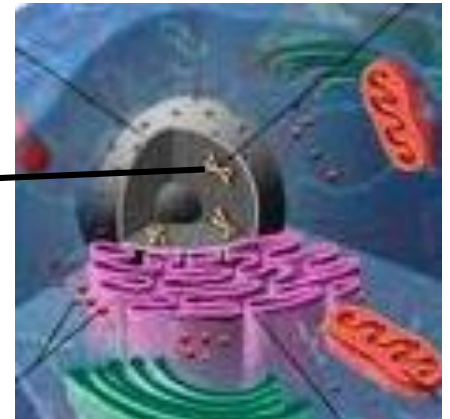


# Chromosomes

- Thick, rodlike structures found in the nucleus that are made of nucleic acids or DNA and RNA.
- Direct all cell activities, including growth and reproduction.
- Pass on the traits of the cell.
- Found in both animal and plant cells.

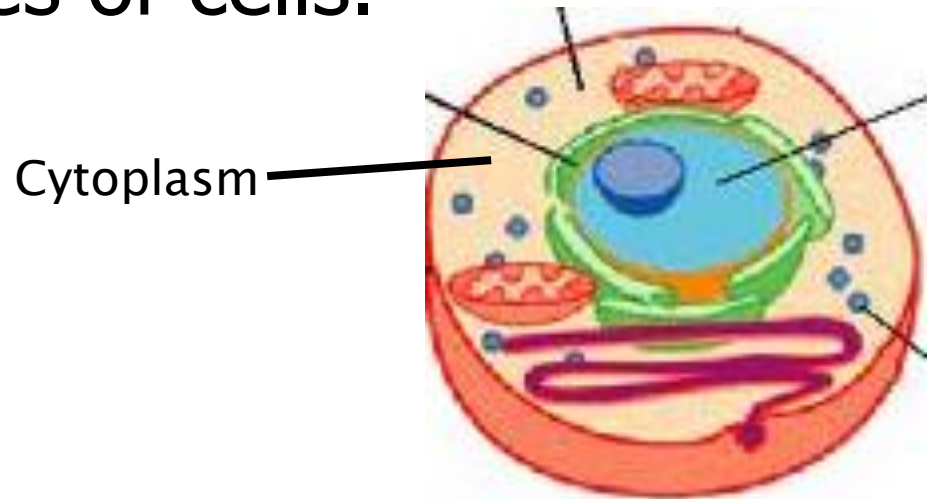


Chromosomes



# Cytoplasm

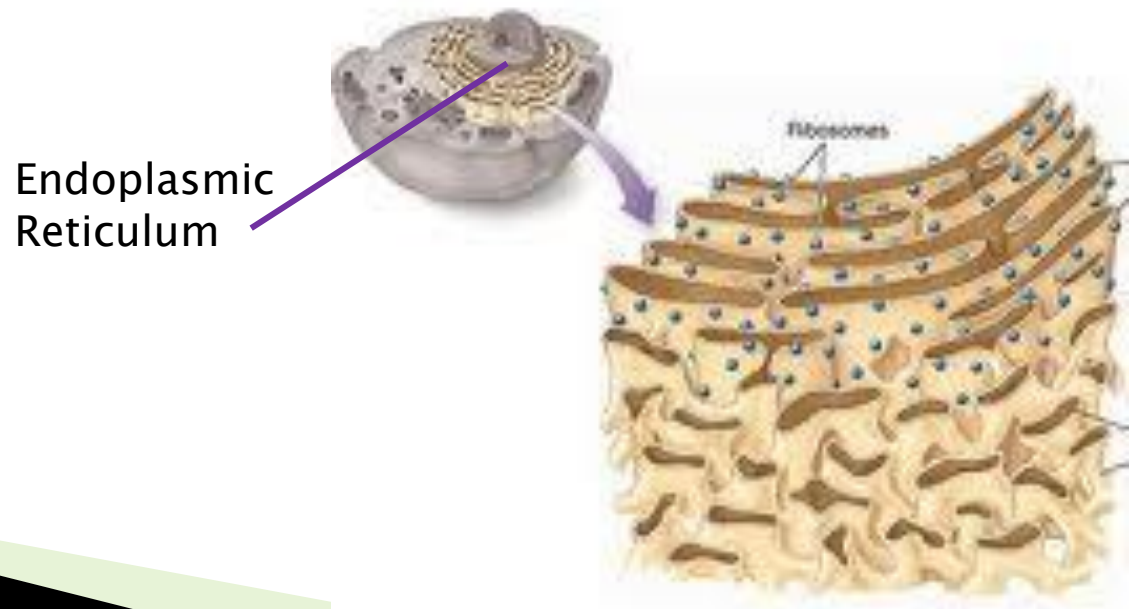
- Clear, thick, jellylike substance found between the cell membrane and the nucleus.
- Protects and supports the organelles and moves materials around inside of the cell.
- Is constantly flowing within the cell.
- Found in both types of cells.





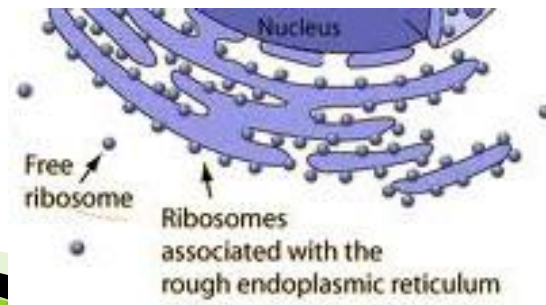
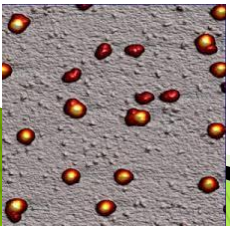
# Endoplasmic Reticulum

- Clear, tubular passageways that lead out of the nuclear membrane.
- Transportation system of the cell.
- Carries proteins around and out of the cell.
- Found in both types of cells



# Ribosomes

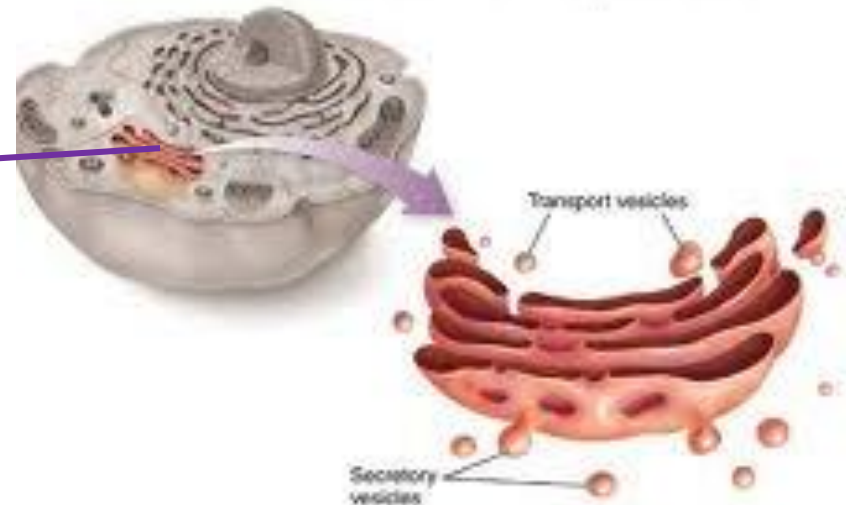
- Round, grainlike bodies.
- Mostly found attached to the endoplasmic reticulum, but can be found floating freely in the cytoplasm.
- Made primarily of RNA.
- Are the protein-making sites of the cell.
- Found in both plant and animal cells.



# Golgi Apparatus

- Consists of folded membranes that look like a stack of pancakes.
- Modifies proteins, transports lipids and creates lysosomes.
- Found in animal and plant cells.

Golgi Apparatus



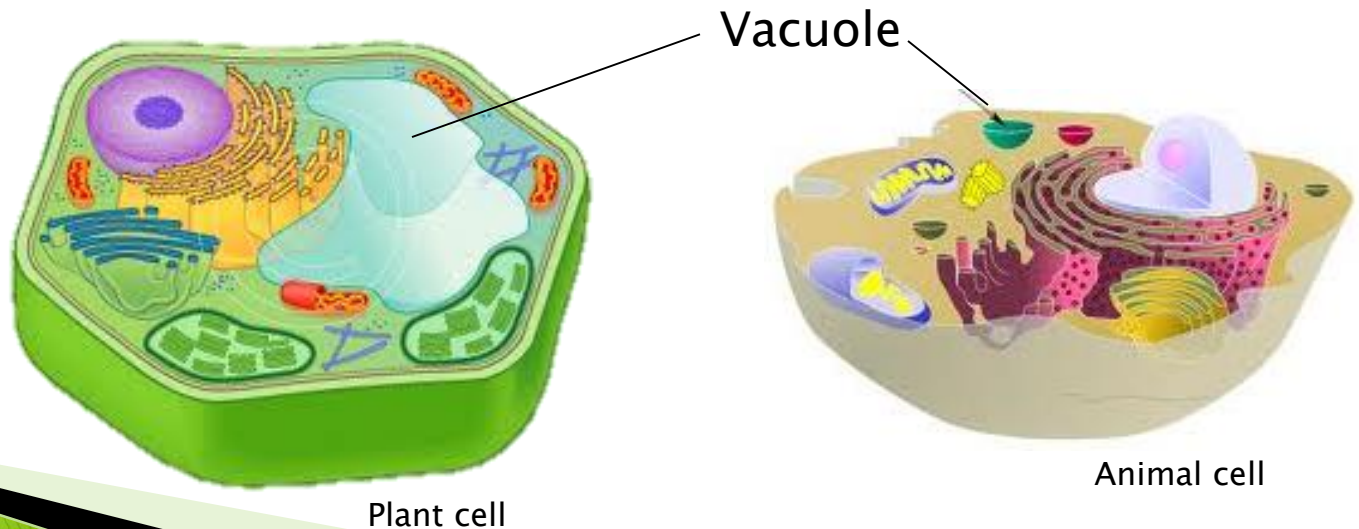
# Mitochondria

- Rod-shaped structures.
- Called the “powerhouses” of the cell.
- They supply energy for the cell by breaking down sugar into water and carbon dioxide.
- Some very active cells that require a lot of energy, like liver cells, may have more than 1000 mitochondria.
- Found in animal and plant cells.



# Vacuoles

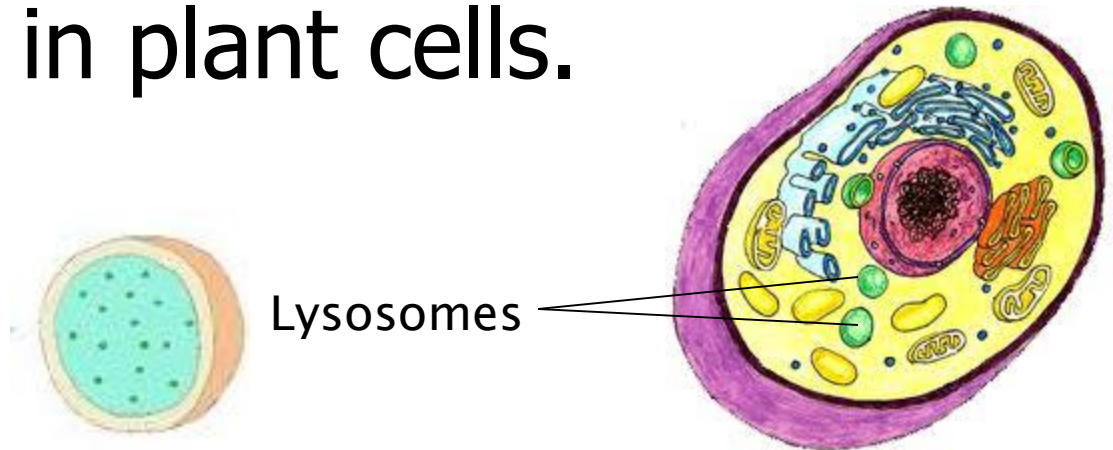
- Water-filled sacs.
- Plant cells usually have one large vacuole.
- Animal cells have a few small, round vacuoles.
- Store water, food, waste and other materials.





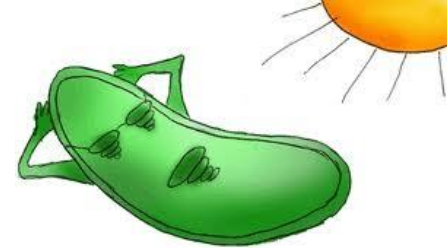
# Lysosomes

- Small, round structures.
- The “cleanup crews” of the cell.
- Digest food, old cell parts and even whole damaged or dead cells.
- Common in animal cells, but very rarely seen in plant cells.





# Chloroplasts



- Large, irregularly shaped green structures.
- Contain chlorophyll which captures the energy of sunlight and makes food for the cell through photosynthesis.
- Found only in plant cells.



Chloroplast

