

Name:	Grade: 9 ____	October 2020
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Biology



Chapter 3

Sections 3.1 pg 70 and 3.2 pg 73

Principles of the cell theory:

- All organisms are made of cells.
- All existing cells are produced by other living cells.
- The cell is the most basic unit of life.

Key Terms	Definition
Cytoplasm	It is a jelly like structure between nucleus and cell membrane and contains all the cell organelles.
Organelles	These are the structures inside the cell specialized to perform different functions inside the cell.
Prokaryotic cells	These are simple cells without a nucleus.
Eukaryotic cells	These are complex cells with a nucleus in the centre.
Cytoskeleton	It is a flexible network of proteins that provide structural support for the cell.
Nucleus	It is the main part of the cell and controls all its activities.
Endoplasmic reticulum	It is an interconnected network of thin, folded membranes and helps in the production of proteins and lipids.
Ribosomes	These are tiny organelles which help the cell to make proteins.

Term 1 Assessment Revision Sheet AY 2020/2021

Golgi apparatus	A layered structure which helps in packaging and delivering proteins to all parts of the cell.
Vesicles	These are short lived particles which help in the storage and transport of proteins.
Mitochondria	They supply energy to the cell. Also called power house of the cell.
Vacuole	It is a fluid filled sac used for the storage of materials needed by the cell.
Lysosomes	They defend a cell from the attacks of bacteria and viruses.
Centrioles	They are cylinder shaped organelles which help to divide DNA during cell division.
Cell Wall	It is a rigid layer that gives protection, support and shape to the cell. It is only present in plants and bacteria.
Chloroplast	These organelles carry out photosynthesis.

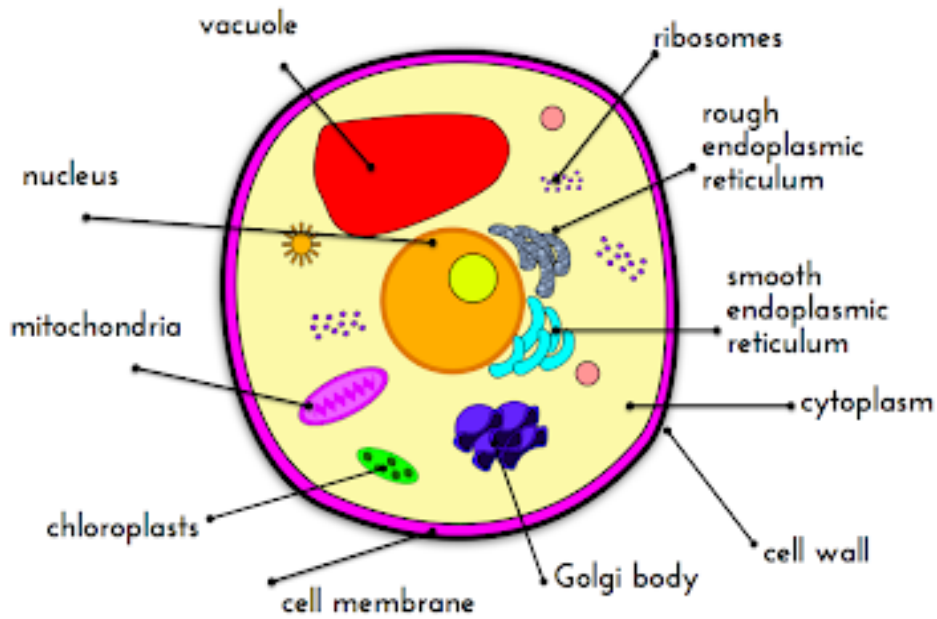
Comparison of Prokaryotic and Eukaryotic cells

Prokaryotic cells	Both	Eukaryotic cells
Oldest cell type	Have DNA	Evolved from prokaryotes
No nucleus	Have cytoplasm (cell liquid)	Have nucleus
Very small and simple	Have membrane	Large and complex
Single cell organisms		Single or multicellular organisms
Example: Bacteria		Example: plants and animals

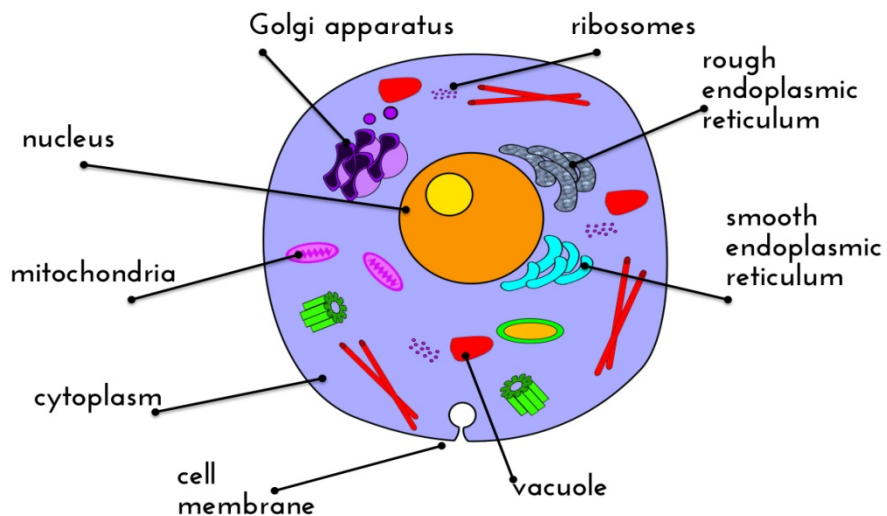
Difference between Plant and Animal cell

	<u>Animal Cell</u>	<u>Plant Cell</u>
Shape	No fixed shape	Fixed shape
Cell Wall	No cell wall	Cell wall is present
Chloroplast	No chloroplast	Has chloroplast which contain chlorophyll
Vacuole	Many small vacuoles	One large vacuole

Let's Learn About Plant Cells



Let's Learn About Animal Cells



Practice some questions.

1. _____ is a jelly like structure between nucleus and cell membrane and contains all the cell organelles.
2. _____ are short lived particles which help in the storage and transport of proteins.
3. _____ is a rigid layer that gives protection, support and shape to the cell. It is only present in plants and bacteria.
4. _____ is the main part of the cell and controls all its activities.
5. Endoplasmic reticulum helps in making _____ and _____ for the cell.
6. _____ cells are old, simple and single cell organisms.
7. _____ defend a cell from the attacks of bacteria and viruses.
8. Chloroplast is present in the plant cells where _____ occurs.
9. Plant cells have one big _____ which stores food and water for them.
10. _____ supply energy to the cell.

Now check your answers.

1: Cytoplasm	2: Vesicles	3: Cell wall
4: Nucleus	5: proteins and lipids	6: Prokaryotic
7: Lysosomes	8: photosynthesis	9: vacuole
10: Mitochondria		