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Cell Vocabulary

Cell	Cell is the smallest structural and functional unit of an organism. It is microscopic. All living organisms are classified as unicellular or multicellular.
Cell Membrane	Cell membrane is a semipermeable membrane made up of lipids and proteins. It is present in both plant and animal cells. The cell membrane controls what passes in and out of the cell and works like the security guard of the cell.
Cell Wall	Cell wall is a tough and rigid layer that surrounds the cell. It is made up of cellulose. It is absent in animal cells.
Centrioles	Centrioles are cylindrical cell structures composed of groupings of microtubules, which are tube-shaped molecules or strands of proteins.
Centrosomes	Centrosomes are organelles where microtubules are organized. They regulate cell division. A centrosome is composed of two centrioles at right angles to each other.
Chromosomes	Chromosomes are microscopic thread-like structures found in the nucleus of the cell and packed with DNA. They carry hereditary information in the form of genes.
Cytoplasm	Cytoplasm is a translucent jelly-like substance located between the nucleus and the cell membrane. It is made up of water and salts. The cytoplasm contains the organelles.

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Endoplasmic Reticulum	The endoplasmic reticulum is a network of tubules and flattened sacs. It plays a major role in the production, processing, and transport of proteins and lipids. It is the cell's transport system and is of two types - smooth ER (without ribosomes) and rough ER (with ribosomes).
Golgi Apparatus / Golgi Complex / Golgi Body	Golgi apparatus is composed of flat sacs, stacked in a bent and semicircular shape. It receives proteins and other newly formed substances from the ER, packages and ships them to the other parts of the cell. It is responsible for manufacturing, warehousing, and shipping cellular products.
Lysosomes	Lysosomes are spherical membranous sacs of acidic enzymes which help digest macromolecules. Lysosomes act as the garbage disposal and recycling centers of the cell and are often referred to as "suicidal bags".
Microtubules	Microtubules are fibrous, hollow rods, that function primarily to help support and shape the cell. They form cell structures called centrioles. They help in transport of materials within the cell.
Mitochondria	Mitochondria are distinctive oblong or oval shape organelles bound by a double membrane. They are considered the "power house" of the cell. They generate fuel for the cell's activities through cellular respiration.
Nuclear Membrane	Nuclear membrane is a double-layered structure that encloses the contents of the nucleus. The outer layer of the membrane is connected to the endoplasmic reticulum. A fluid-filled space is present between the two layers of a nuclear membrane.
Nucleolus	Nucleolus is a dense, spherical-shaped structure present in the nucleus of a cell. It plays an indirect role in protein synthesis by producing ribosomes.

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Nucleus	Nucleus is a spherical shaped organelle. It is the brain or the command center of the cell. It regulates the integrity of genes and gene expression and is also responsible for the protein synthesis, cell division, growth and differentiation.
Organelles	Organelles are tiny cellular structures that are specialized to perform important functions within a cell. Organelles are embedded within the cytoplasm.
Plastids	Plastids are major organelles found only in the cells of plants and algae. They contain pigments used in photosynthesis, and the types of pigments present can change or determine the cell's color. Chloroplasts, leucoplasts and chromoplasts are the different types of plastids.
Ribosomes	Ribosomes are small grain-shaped organelles that produce proteins from amino acids. They consist of RNA and proteins. Ribosomes link amino acids together and are the protein builders and protein synthesizers of the cell.
Pinocytotic vesicle	Pinocytotic vesicle is a structure that aids in transportation as a cell's plasma membrane absorbs molecules from outside by a process called pinocytosis also known as cell drinking.
Peroxisomes	Peroxisomes are small vesicles that contain digestive enzymes for breaking down toxic materials in the cell. They differ from lysosomes in the type of enzyme they hold.
Vacuoles	Vacuoles are fluid-filled storage bubbles present in both plant and animal cells. They are responsible for nutrient storage, detoxification, and waste disposal.