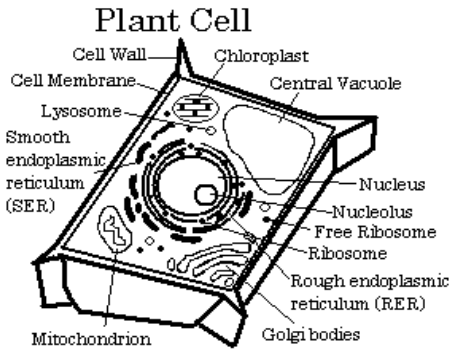
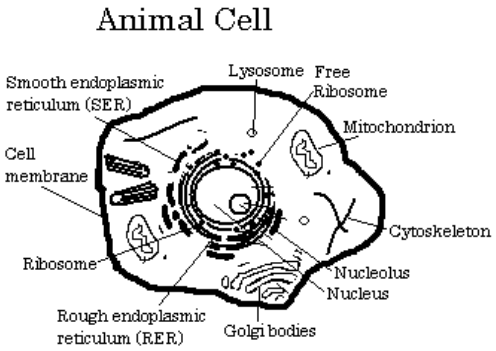


Unit: Cells



Overall Standard

S7L2. Obtain, evaluate, and communicate information to describe how cell structures, cells, tissues, organs, and organ systems interact to maintain the basic needs of organisms.

Element 2a Develop a model and construct an explanation of how cell structures (specifically the nucleus, cytoplasm, cell membrane, cell wall, chloroplasts, lysosome, and mitochondria) contribute to the function of the cell as a system in obtaining nutrients in order to grow, reproduce, make needed materials, and process waste.

Learning Targets

- Nucleus
- Cytoplasm
- Cell Membrane
- Cell Wall
- Chloroplasts
- Lysosome
- Mitochondria

Element 2b b. Develop and use a conceptual model of how cells are organized into tissues, tissues into organs, organs into systems, and systems into organisms.

Learning Targets

- Cell
- Tissue
- Organ
- Organ System (Body system)
- Organism

Unit 4 Cells Vocabulary

- cell membrane - protective outer covering of all cells that is made up of a double layer of fatlike molecules and regulates the interaction between the cell and the environment.
- cell -smallest unit of a living thing that can perform the functions of life; has an orderly structure and contains hereditary material.
- cell wall - rigid structure that encloses, supports, and protects the cells of plants, algae, fungi, and most bacteria.
- chloroplast - green chlorophyll-containing, plant-cell organelle that converts sunlight, carbon dioxide, and water into sugar.
- cytoplasm - The gel-like material within a cell apart from the nucleus.
- endoplasmic reticulum - cytoplasmic organelle that moves material around in a cell and is made up of a complex series of folded membranes; can be rough (with attached ribosomes) or smooth (without attached ribosomes).
- Golgi body - organelles that package cellular materials and transport them within the cell or out of the cell.
- Lysosome – Lysosomes are in nearly every animal-like eukaryotic cell. Lysosomes hold enzymes that were created by the cell. The purpose of the lysosome is to digest things. They might be used to digest food or break down the cell when it dies.
- mitochondrion - cell organelle that breaks down lipids and carbohydrates and releases energy.
- nucleus - organelle that controls all the activities of a cell and contains hereditary material made of proteins and DNA.
- organ - structure, such as the heart, made up of different types of tissues that all work together.
- organ system - a group of organs working together to perform a certain function.
- organelle - structure in the cytoplasm of a eukaryotic cell that can act as a storage site, process energy, move materials, or manufacture substances.
- ribosome - small structure on which cells make their own proteins.
- tissue - group of similar cells that work together to do one job.