

Define the basic structural and functional unit of life.	A cell is the basic structural and functional unit of life.
Explain the Cell Theory.	The Cell Theory states that all living organisms are made up of cells, cells are the basic units of life, and all cells arise from pre-existing cells.
Differentiate between prokaryotic and eukaryotic cells.	Prokaryotic cells are unicellular organisms without a nucleus, while eukaryotic cells are more complex, can be unicellular or multicellular, and have a nucleus.
Describe the structure and functions of the cell membrane.	The cell membrane is a phospholipid bilayer that protects the cell, provides structure, and regulates the movement of substances in and out of the cell.
Identify the different types of transport across the cell membrane.	The different types of transport across the cell membrane include passive transport, active transport, facilitated diffusion, and osmosis.
Define tissues and name the four basic types of tissues.	Tissues are groups of similar cells that perform a specific function. The four basic types of tissues are epithelial, connective, muscle, and nervous tissue.
Explain the difference between simple and complex tissues.	Simple tissues consist of one type of cell, while complex tissues are made up of more than one type of cell.
How do complex tissues function in the body?	Complex tissues function by combining different cell types to perform specialized roles, such as in organs and systems.
What are the functions of epithelial tissue?	Epithelial tissue functions include protection, absorption, secretion, and sensation.
What is osmosis?	Osmosis is the movement of water molecules across a selectively permeable membrane from an area of lower solute concentration to an area of higher solute concentration.

What role does the cell membrane play in a cell?	The cell membrane regulates the entry and exit of substances, provides protection, and maintains the cell's integrity.
What are the key characteristics of prokaryotic cells?	Prokaryotic cells are characterized by their lack of a nucleus, smaller size, and simpler structure compared to eukaryotic cells.
List the main components of the Cell Theory.	Theory are: 1) All living organisms are composed of cells, 2) The cell is the basic unit of life, 3) All cells arise from pre-existing cells.
What is the primary function of a cell?	The primary function of a cell is to carry out the processes necessary for life, including metabolism, energy production, and reproduction.
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