

CELL CYCLE – VOCABULARY ASSIGNMENT (w/Answers)

Please use your textbook to find and write the definitions for the vocabulary terms listed below. Utilize the book's GLOSSARY as needed.

Cell – The smallest unit that is able to perform the basic functions of life.

Unicellular – A term used to describe an organism that is made up of a single cell.

Multicellular – A term used to describe an organism that is made up of many cells.

Nucleus – The structure in a eukaryotic cell that contains the genetic material a cell needs to reproduce and function.

Prokaryotic Cell – A cell that lacks a nucleus and other organelles, with DNA that is not organized into chromosomes.

Eukaryotic Cell – A cell in which the genetic material is enclosed within a nucleus, surrounded by its own membrane.

Cell Membrane – The outer boundary of the cytoplasm, a layer that controls what enters or leaves the cell; a protective covering enclosing the entire cell.

Cytoplasm – A thick, gelatin-like material contained within the cell membrane. Most of the work of the cell is carried out in this material.

Organelle – A structure in a cell that is enclosed by a membrane and that performs a particular function.

Specialization – The specific organization of a cell and its structure that allows it to perform a specific function.

Deoxyribonucleic Acid (DNA) – The genetic material found in all living cells that contains the information needed for an organism to grow, maintain itself, and reproduce.

Double Helix

Chromosome – The physical structure in a cell that contains the cell's genetic material.

Chromatids

Cell Cycle – The normal sequence of development and division of a cell.

Interphase – The part of the cell cycle during which a cell is not dividing; the cell is growing, engaging in normal cell life activities, and duplicates its DNA to be ready for later cell division.

Mitosis – The part of the Cell Cycle during which the nucleus divides, and DNA and other material in the parent cell moves into position for cell division. There are four main phases of this process.

Prophase – The phase of mitosis where the long strands of DNA in the nucleus condense to chromosomes and the nuclear membrane begins to disappear.

Metaphase – The chromosomes line up in the middle of the cell.

Anaphase – The chromosomes split into two separate chromosomes and are pulled to opposite sides of the cell.

Telophase – New nuclear membrane forms around each of the two clusters of chromosomes at each opposite side of the cell. The chromosomes return to their threadlike form. The center of the cell begins to pinch together.

Cytokinesis – The parent cell's cytoplasm is divided and two smaller, separate, identical daughter cells are formed.