

Study Guide for Cell Test

Word	√	Explanation
Cell		Basic unit of structure and function in living things
Hierarchy in Organisms		A system of cell organization from least complex to most complex (cell – tissue – organ – organ system – organism)
Organelles		Tiny structures that have specific functions and make up the insides of cells
Cell Theory		A general statement in biology that all living things consist of cells, each cell has a specific function, and all cells came from previously existing cells
Microscope		A tool used to show objects too small for the human eye to see and was useful in the discovery of diseases and advancements in medicine and cell biology
Cell Wall		The firm layer that surrounds and supports most plant cells
Cell Membrane		The outside layer surrounding the contents of a cell, it allows materials in and out of the cell (like a fence)
Nucleus		The nucleus controls many of the functions of the cell, like a command center
Nuclear membrane		The outside layer of the nucleus, protects the genetic materials inside the nucleus and allows materials in and out of the nucleus (like a fence)
Chloroplasts		Use energy from the sun to make food for the plant through photosynthesis
Vacuoles		Storage bubbles found in cells
Mitochondria		The cell's powerhouse; supplies most of the energy for cells
Lysosomes		The cell's recycler; breaks down worn out products to be used by the cell
Golgi bodies		The part of the cell that packs and carries
Differentiate between plant and animal cells		Plant cells have a cell wall (for support), chloroplasts (which contain the chlorophyll needed for photosynthesis), which are not found within animal cells
Prokaryotic and Eukaryotic		Prokaryotic cells do not contain a nucleus or any other membrane-bound organelles while eukaryotic cells contain membrane-bound organelles.

Review Questions

1. Give a definition for the cell.
2. List and describe three parts of a microscope.
3. What are the differences in organelles between animal cells and plant cells?
4. Describe the three parts of the cell theory.
5. Describe the hierarchy in organisms in your own words.
6. State the function of each of the following organelles:
 - a. Cell membrane
 - b. Cell wall
 - c. Nucleus
 - d. Nuclear membrane
 - e. Chloroplast
 - f. Two more of your choice:
7. Give two reasons why the microscope is such an important invention in science.
8. List three scientists you think helped the most in creating the cell theory. Why those three?
9. Why is it important to learn about cells? How can they impact your life?
10. How does this cell unit connect with our past unit of plants?