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| What are organelles?  What is the cell wall’s task?  What is the cell membrane’s task?  What is a good way to remember the nucleus?  Compare the nuclear envelope to a mailing envelope.  What is the chromatin?  What are the nucleolus, ribosomes, and proteins?  What is the mitochondria’s task?  What is the ER?  What is the Golgi bodies’ task?  What is the task of the chloroplasts?  What is the task of vacuoles?  What is the task of the lysosomes?  How are cells organized in many-celled organisms?  Summary: | Organelles are tiny structures that carry out specific functions within the cell.  The cell wall is a rigid layer of nonliving material that surrounds the cells of plants and some other organisms. A plant’s cell wall helps to protect and support the cell.  The cell membrane controls what substances come into and out of a cell.  You can think of the nucleus as the cell’s control center, directing all of the cell’s activities.  Just like a mailing envelope protects the letter inside it, the nuclear envelope protects the nucleus.  The chromatin contains genetic material, the instructions in directing the cell’s function.  A nucleolus is where ribosomes are made. Ribosomes are the organelles where proteins are produced. Proteins are important chemicals in cells because they produce energy.  Mitochondria convert energy in food molecules to energy the cell can use.  The endoplasmic reticulum carries material throughout the cell.  The Golgi bodies receive materials, package them, and distribute them.  Chloroplasts capture energy from sunlight and use it to produce food for the cell. (only in plants)  Vacuoles are the storage areas of cells.  Lysosomes contain chemicals that break down certain materials in the cell.  In many-celled organisms, cells are often organized into tissue, organs, and organ systems. |