Cell Organelles – Foldable Study Guide

Cell Wall
A strong layer around the cell membrane in plants, algae, and some bacteria

Cell membrane
Cell Membrane
a thin flexible outer layer that protects and surrounds the cell and REGULATES what enters and leaves the cell

Nucleus
Control center inside a cell contains the cell’s genetic DNA material and Controls the cell’s activities

Nucleolus
Nucleolus
Small region in the nucleus where the assembly of ribosomes begins.

ribosomes
RIBOSOMES
Small particles in the cell where PROTEINS made of RNA and Protein are assembled
| Nuclear envelope | **Diagram of a Nucleus of a cell** | **Nuclear Envelope**
| --- | --- | ---
| double-membrane layer that surrounds the nucleus of a cell |
| Nuclear pore | **Diagram of a Nucleus of a cell** | **NUCLEAR PORE**
| --- | --- | ---
| a tiny hole in the membrane that surrounds the nucleus of a cell and allows material to move in and out of the nucleus “mini doorway” |
| Chromosomes | **Diagram of a Nucleus of a cell** | **Chromosome**
| --- | --- | ---
| a threadlike structure in the nucleus that contains the genetic information passed from one generation to the next |
| Golgi Apparatus | **Diagram of a Nucleus of a cell** | **Golgi apparatus**
| --- | --- | ---
| enzymes attach carbohydrates and lipids to proteins |

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Mitochondria = POWERHOUSE
Mitochondria releases *energy*
and produces *ATP* using energy stored in food molecules.

Cytoskeleton

*a network of protein filaments* to help the cell maintain its shape and help the cell with movement.

Smooth Endoplasmic Reticulum

package proteins to be used in the cell when needed.

Rough Endoplasmic Reticulum

package proteins to be used in the cell when needed.
**Lysosome**

Lysosome are filled with digestive enzymes that surround and break down worn out cell parts.

**Flagella**

Flagella are a “whip-like” structure that helps some cells move.

**Cilia**

Cilia are short “hair-like” structures that help some cells move.

**Chloroplast**

Chloroplast uses energy from the sunlight to make energy-rich food molecules by photosynthesis.

**Vacuole**

Vacuole stores water + salt + proteins + carbohydrates.