

CELL STRUCTURES/ORGANELLES

Prokaryotic vs Eukaryotic

-no nucleus	-nucleus
-mainly bacteria	-animals, plants, fungi, protists
-small! simple!	-large! more complex!
-no organelles	-organelles

organelle: membrane-bound structures with a function

Cell wall / Cell membrane

-only in plants	-plants and animals
-provide strong support	-phospholipid bilayer
-doesn't move during osmosis	

Nucleus

-stores DNA (chromatin)

Mitochondria

-ATP and cellular respiration
-has a double membrane and its own DNA/ribosomes

Vesicles

-transport materials
-can be led by MOTOR PROTEINS

Lysosomes

-break down materials

Cytoskeleton

-dense network of protein fibers
-support and shape the cell
-anchors organelles

Golgi Apparatus

-protein modification and sorting

Endoplasmic Reticulum

Rough ER	Smooth ER
-ribosome synthesis	-lipid synthesis
	-detoxification

Ribosomes

-read RNA
-synthesize proteins

Chloroplasts

-photosynthesis
-thylakoid stacks (green color)
-own DNA and ribosomes

Central vacuole

-H₂O regulation
-only plants

METABOLISM

Redox Reactions

LEO	GER
lose electrons	gain electrons
oxidizing	reduction

Electron movement

*an electron closer to the nucleus has LESS energy than an electron further from the nucleus
*when an electron moves closer to the nucleus, it gives off small amounts of energy
^must be slow steps

Glycolysis -> pyruvate

