

Cell theory

-All living things are made of cells
-New cells are created by old cells dividing into two
-Cells are the basic building units of life.
Remember (people, divide, build) or pbd

ff

Unicellular:
single cell organism
eg bacteria and archaea
Multicellular
multi cell organism
eg Plants, mammals

organelle eukaryote

cell organelle: euchloroplast
(makes energy for plants)
rough er
(has ribosomes, makes new proteins)
smooth er
(makes lipids, no ribosomes)
golgi apparatus
(prepares things to leave the cell, sorts)
mitochondrion
(cell respiration, makes energy)
nucleus
(holds DNA and RNA)
vacuole
(storage, gets rid of waste, controls homeostasis)
lysosome
(breaks down larger molecules)
nucleolus
(creates ribosome)
Ribosomes
(makes proteins)
centrioles
(organizes movement of chromosomes, help in mitosis)
cytoskeleton
(network of proteins, helps maintain cell shape)
flagellum
(for movement)

organelle pro

organelle found in pro:
pilus
(attach to things)
capsule
(sticky, helps keep cell moist)
cell wall
(protects cell and gives it shape)
plasma membrane
(doors, lets things enter and leave)
Nucleoid
(contains dna)
cytoplasm
(contains nutrients)
flagellum
(helps move)
ribosome
(makes protein)

nucleus anatomy

nucleolus
(primary source of ribosome biogenesis, made of RNA and proteins)
nucleoplasm
(keeps the shape of the nucleus and provides a substance for the nucleolus to float in)
nuclear pore
(allows small molecules and ions to pass in or out)
nuclear envelope
separates the content of the nucleus and the rest of the cell)
Chromatin
(mix of DNA and proteins that make chromosomes, chrom- prefix)

The 2 types of cells

Prokaryote
- no nucleus
- no cell membrane
- always unicellular
- no defined organelles
- thought to be older
- far smaller
- cell walls though

The 2 types of cells (cont)

- smaller ribosomes
Bacteria and archaea
remember, "older so less good, lacking everywhere"
eukaryote
- defined nucleus
- defined organelles
- cell wall with chitin
- more complex
- usually bigger
- has DNA
- Larger Ribosomes
plant, animal, fungi
"bigger more better type, has to be bigger cos its complex, like the 2.0 version"
Both have
- DNA
- come from Mitosis
- can be unicellular
- Ribosomes
- Cell membranes
- Cytoplasm