

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