Biology Notes: Cell Structure

Cell Wall:
- Function:
  - Supports cell
- Appearance:
  - Rectangular, cellulose structure
- Location:
  - Surrounds plant cells

Vacuoles
- Function:
  - Gives the cell strength/shape
  - Stores materials (saps)
- Appearance:
  - Fluid filled space
- Location:
  - Plant cells

Mitochondrion:
- Function:
  - Supply energy
  - Site of respiration
- Appearance:
  - Oval shape
  - Many infoldings
  - Loop of DNA
- Location:
  - Animals:
    - Muscle Tissue
    - Liver
  - Plants:
    - Meristem

Chloroplast:
- Function:
  - Site of photosynthesis
- Appearance:
  - Green
  - Contain pigment chlorophyll
  - Contain starch grains
  - Contain a strand of DNA
- Location:
  - Leaf cells:
    - Mesophyll layer
    - Ground Tissue

Nucleolus
- Function:
  - Ribosomes are made here
- Appearance:
  - Area in the Nucleus
  - Stains very darkly
- Location:
  - Found in the nucleus

Nucleus:
- Function:
  - Control centre of the cell
  - Use genes to control protein production
- Appearance:
  - Have numerous nuclear pores
  - Contain chromatin (chromosomes not dividing)
  - Has a double membrane
  - Contains the nucleolus
- Location:
  - Suspended in the cytoplasm

Cytoplasm:
- Function:
  - Surrounds all cell organelles
- Appearance:
  - Jelly-like fluid
- Location:
  - Surrounds all cell organelles

Cell Membrane:
- Function:
  - Retains cell contents
  - Control what enters/exits cell
  - Give support to cell
  - Recognise molecules
- Appearance:
  - Phospholipid bilayer
    - Phosphates - outside
    - Lipid - middle
    - Proteins embedded
- Location:
  - Surrounds cell contents

Ribosome:
- Function:
  - Make proteins
- Appearance:
  - Composed of RNA
  - Small
  - Numerous
- Location:
  - Made in the nucleolus
  - Suspended in the cytoplasm