

Microscopy

- Light Microscopy
 - Maximum Magnification- 1000x
 - Maximum resolution - 10 micrometer (um)
- Electron Microscopy
 - Maximum magnification - 10,000,000x
 - Maximum Resolution

Cell Fractionation

- A way to isolate different components of cells for detailed study

Two classification of Cells:

- Prokaryotic
 - simple (no membrane bound organelle)
 - small in size
 - DNA, but NO nucleus
 - Can only perform one major task at a time
 - No membrane bound organelles “little organ”
 - Normally bacteria
- Eukaryotic
 - Complex
 - 10-100 times bigger than a prokaryote
 - DNA in a nucleus (control center for the cell- like the brain in the human body)
 - Able to multi-task (perform several jobs at once)
 - Membrane bound organelles “little organ” that help the cell perform several functions at once
 - Two main types: animal and plant cells
- Both contain:
 - DNA
 - Cell (plasma) membrane
 - Ribosomes
 - Cytoplasm

Osmosis and Tonicity

- Osmosis- diffusion of water
- Tonicity
 - Isotonic- same concentration inside as out
 - Hypertonic- higher concentration outside cell than in
 - Hypotonic- less dissolved particles inside the cell than out