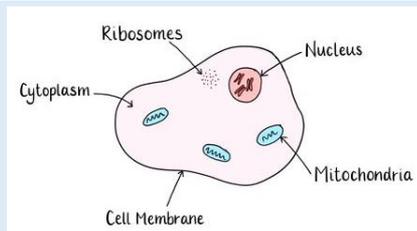
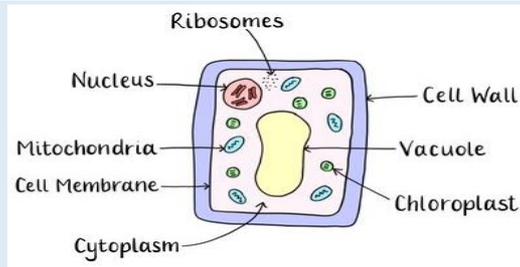


1: Animal Cells (Eukaryotic)



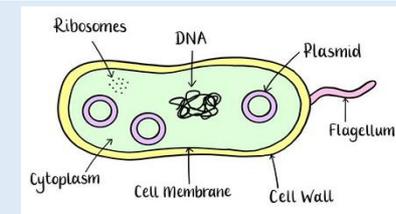
Nucleus contains genetic material
Mitochondria site of aerobic respiration
Cytoplasm where chemical reactions happen in the cell
Cell Membrane controls what enters and exits the cell
Ribosomes site of protein synthesis

2: Plant Cells (Eukaryotic)



Chloroplasts site of photosynthesis
Cell Wall made of cellulose, provides strength and structure
Vacuole filled with cell sap, water and waste to keeps the cell turgid

3: Eukaryotic and Prokaryotic Cells



Eukaryotic Cells contains a nucleus and other membrane bound organelles e.g. mitochondria
Prokaryotic Cells does not contain a nucleus or any other membrane bound organelles e.g. a bacterium
Chromosomal DNA DNA in bacterial cells found loose in the cytoplasm and not contained within a nucleus

4: Microscopes

Light microscope	Electron microscope
Low magnification	High magnification
Low resolution	High resolution
Can view living specimens	Cannot view living specimens
2D images	3D images
Colour images	Black and white images

Microscopy Equations

$Image\ size = actual\ size \times magnification$

$Magnification\ lens = eye\ piece\ lens \times objective\ lens$

5: Preparing Slides

Preparing a Microscope Slide (plant tissue)

1. Take a thin layer of plant tissue (so light can pass through)
2. Place onto the microscope slide
3. Add iodine solution (to highlight internal structures)
4. Use a mounting needle to place on cover slide (to avoid air bubbles)
5. Place under the lowest magnification objective lens

6: Observing Slides

Slide a thin flat piece of glass that the specimen rests on

Iodine Solution used to stain the specimen to make internal structures more visible

Eye piece the part of the microscope that is looked through to see the specimen

Objective Lenses the parts of the microscope that magnify the specimen

Focusing Knob used to sharpen the quality of image (to make it clearer)

Resolution the ability to distinguish between two objects

