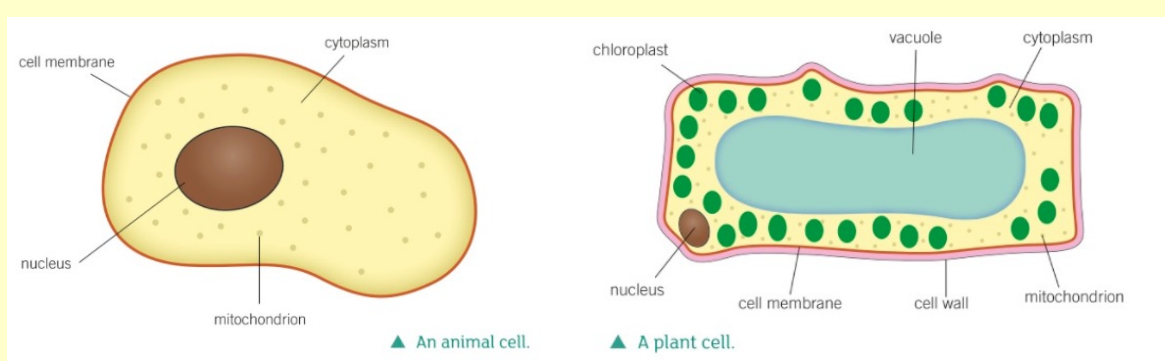
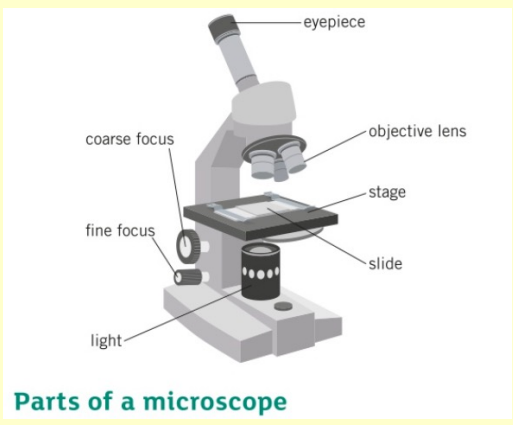


Biology B1.1: Cells

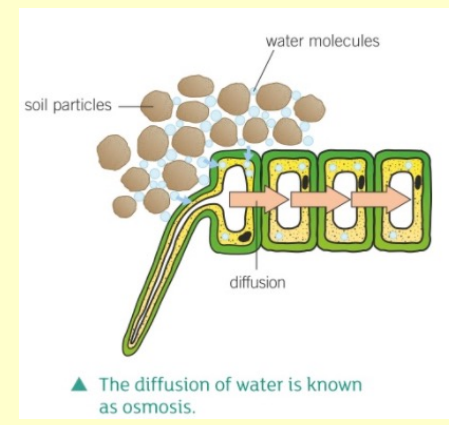
Section 1: Cell Structure		Eukaryotic	
Cell Structure	Function	Animal Cells	Plant Cells
1 Nucleus	Contains genetic information that controls the functions of the cell.	Y	Y
2 Cell membrane	Controls what enters and leaves the cell.	Y	Y
3 Cytoplasm	Where many cell activities and chemical reactions within the cell occur.	Y	Y
4 Mitochondria	Provides energy from aerobic respiration .	Y	Y
5 Chloroplast	Where photosynthesis occurs.		Y
6 Vacuole	Used to store water and other chemicals as cell sap .		Y
7 Cell wall	Strengthens and supports the cell. (Made of cellulose in plants.)		Y



Section 2: Specialised Cells	
Specialised Cell	How structure relates to function
8 Sperm cell	Streamlined head and long tail. Contains lots of mitochondria to transfer energy.
9 Nerve cell	Long and thin. Transmits electrical impulses over a distance.
10 Red blood cell	Contains haemoglobin to transport oxygen. Disklike shape to increase surface area .
11 Root hair cell	Long extension to increase surface area for water uptake by osmosis; thin cell wall .
12 leaf cell	Found at the top of the leaf and are packed with chloroplasts to maximise photosynthesis .



Section 4: Microscopy	
13 Magnification	The degree by which an object is enlarged . Magnification = $\frac{\text{size of image}}{\text{size of real object}}$
14 Microscope	An instrument used to magnify objects.



Section 5: Diffusion	
15 Diffusion	The movement of particles from an area of high concentration to an area of low concentration .
16 Concentration	A measure of the number of particles of a substance in a fixed volume .

Section 6: Unicellular organisms	
17 Unicellular	An organism made of just one cell .
18 Amoeba	A unicellular organisms found in water that feeds on other organisms.
19 Euglena	A unicellular organism found in water that has chloroplasts for photosynthesis .
20 Flagellum	Tail-like structure that spins like a propeller.
21 Binary Fission	Method of reproduction for amoeba and euglena. One cell splits into two identical cells .

