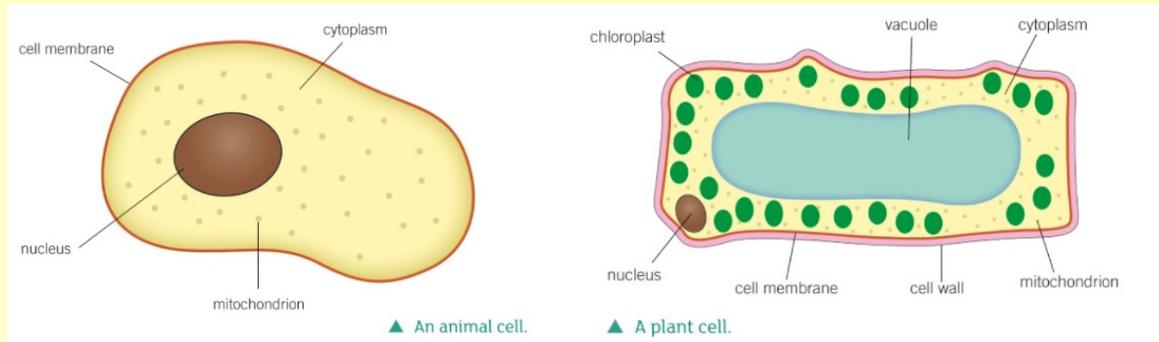
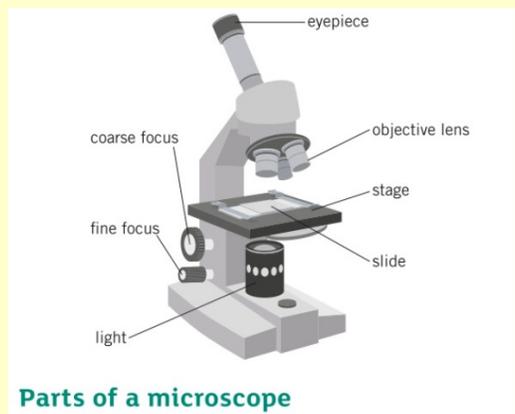


# Biology B1.1: Cells

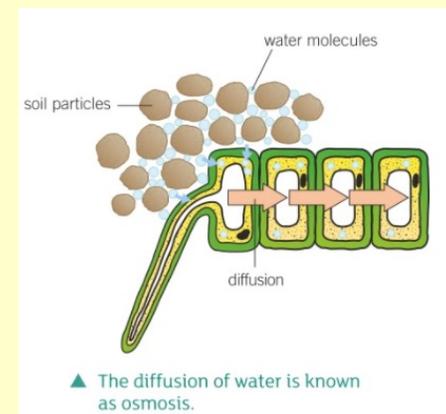
Section 1: Cell Structure		Eukaryotic	
Cell Structure	Function	Animal Cells	Plant Cells
<b>1 Nucleus</b>	Contains <b>genetic information</b> that <b>controls</b> the functions of the cell.	Y	Y
<b>2 Cell membrane</b>	Controls what <b>enters</b> and <b>leaves</b> the cell.	Y	Y
<b>3 Cytoplasm</b>	Where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



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



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



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

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

