

## Biology Paper 1 knowledge organiser

### B1: Cell biology

<b>Diffusion</b>	The movement of particles from a <b>high concentration</b> to a <b>low concentration</b> <b>along</b> the concentration gradient. This is <b>passive</b> and require <b>no energy</b> .
<b>Osmosis</b>	The movement of water from a <b>high concentration of water</b> to a <b>low concentration of water</b> , <b>along</b> the concentration gradient and through a <b>partially permeable membrane</b> .
<b>Active transport</b>	The movement of particles from a <b>low concentration</b> to a <b>high concentration</b> <b>against</b> the concentration gradient. This requires energy.
<b>Ribosomes</b>	The site of <b>protein synthesis</b> in a cell.
<b>Mitochondria</b>	The site of <b>respiration</b> in a cell.
<b>Prokaryote</b>	An organism which has a <b>cell wall</b> and <b>does not</b> have its DNA in a nucleus.
<b>Eukaryote</b>	An organism which has its <b>DNA inside a nucleus</b> .
<b>Chromosome</b>	A <b>section of DNA</b> that carries genetic information in the form of <b>genes</b> . Human cells contain 46 chromosomes.
<b>Stem Cells</b>	Undifferentiated cells. Embryonic can form any cell, adult are limited
<b>Mitosis</b>	A form of cell division used for <b>growth and repair</b> . It produces <b>2 identical daughter cells</b> .
<b>Exchange Surface</b>	Have a <b>large surface area</b> , <b>thin walls</b> and have a mechanism to maintain a <b>high concentration gradient</b> to increase the rate of diffusion eg) a good blood supply.

