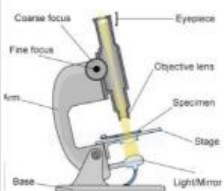


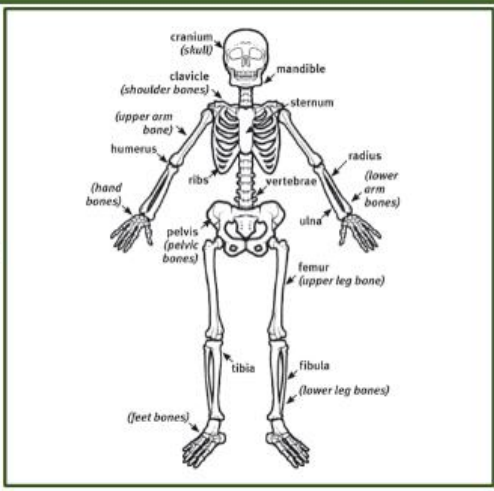
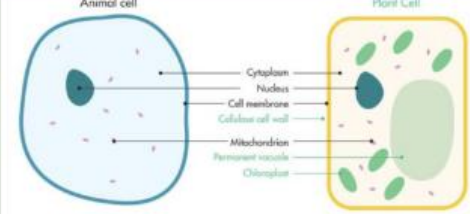
Keyword	Definition
Cell	Basic unit of life. Unicellular organisms only have one cell. Multicellular organisms have many cells.
Cell Membrane	Controls the movement of substances in and out of the cell.
Cytoplasm	Jelly-like substance where chemical reactions take place.
Nucleus	Carries genetic information and controls the cell.
Mitochondria	Where respirations takes place.
Cell Wall	Made of cellulose, provides support to the cell.
Vacuole	Contains cell sap.
Chloroplasts	Contains the green pigment chlorophyll, the site of photosynthesis.
Tissue	Something made from just one type of specialised cell.
Organ	Something made from different groups of specialised cells all working together.
Organ System	When a number of organs work together.
Synovial Joint	A freely moveable joint. Examples include the hip, shoulder, elbow and knee joints.



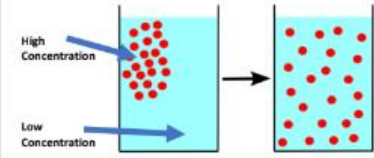
Light Microscope: A device which uses light and a series of lenses to produce a magnified image of an object.

Magnification = How much bigger a sample/object appears under the microscope than it is in real life.

Total magnification = Eyepiece lens x Objective lens





Diffusion: The movement of particles from an area of high concentration to an area of low concentration. Substances diffuse into and out of cells.









Antagonistic Muscles:

- Muscles work by getting shorter.
- Muscles can only pull and can't push.
- Muscles work in pairs.
- When you raise your forearm, the biceps contract and the triceps relax.
- When you lower your forearm, the biceps relax and the triceps contract.



Further Reading:
<https://www.bbc.com/bitesize/guides/z9hyvcw/revision/2>

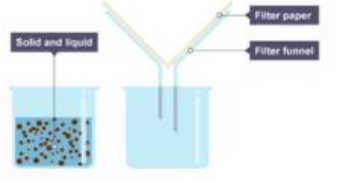
Red Blood Cell	Sperm Cell	Root Hair Cell	Palisade Cell	Nerve Cell	Egg Cell
					
Carries blood around the body. Adaptations: No nucleus, large surface area and biconcave shape.	Carries the male genes. Adaptations: Tail for swimming, mitochondria for energy, acrosome to break down the egg cell.	Take in water from the soil. Adaptations: Long & thin; large surface area for maximum water absorption. Thin cell walls.	Production of food for the plant. Adaptations: Tall and thin. Lots of chloroplasts to absorb sunlight for photosynthesis.	Carry signals around the body. Adaptations: Long axon. Myelin sheath.	Carries the female genes. Adaptations: Lots of mitochondria. Outer layer hardens once fertilised.

Separation Methods

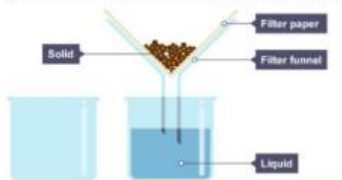
Keyword	Definition
Solution	A liquid mixture in which a solute has dissolves in the solvent
Solute	A minor component in a solution – dissolves in the solvent
Solvent	The liquid which the solute dissolves in
Saturated	The point at which no more solute can dissolve
Pure	Only one type of particle
Dissolve	Solid is mixed into a liquid to become a solution
Particle	A small piece of matter – everything is made up of these
Filter	To remove solid particles from liquid particles
Evaporate	Particles go from a liquid to a gas
Separate	To remove one type of particle from another
Soluble	A substance is capable of dissolving
Mixture	More than one type of particle
Solubility	How much of a substance will dissolve in a solution
Insoluble	A substance is not capable of dissolving

Filtration:

- A method for separating an insoluble solid from a liquid. A beaker containing a mixture of insoluble solid and liquid. There is filter paper in a filter funnel above another beaker.

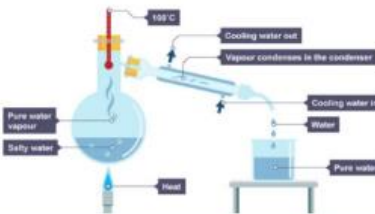


- The mixture of insoluble solid and liquid is poured into the filter funnel.
- The liquid particles are small enough to pass through the paper as a filtrate. The solid particles are too large to pass through the filter paper and stay behind as the residue.



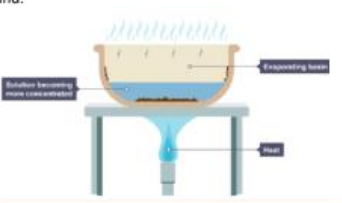
Distillation:

- A method used for separating the solvent from a solution. E.g. water can be separated from a salt solution because the water has a much lower boiling point than the salt.
- Salt water is heated. The water evaporates and its vapours rise.
- The vapours rise and pass into the condenser, where they cool and condense.
- Liquid water drips into a beaker and the salt will be left in the round bottom flask.



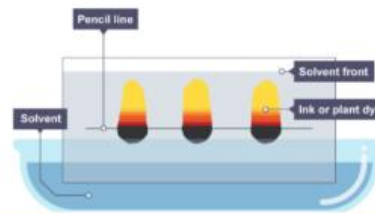
Evaporation:

- A method used to separate a soluble solid from a liquid.
- A solution is placed in an evaporating basin and heated with a Bunsen Burner.
- The water will begin to evaporate and solid particles will begin to form in the basin.
- Once the water has evaporated, it will leave solid crystals behind.



Chromatography:

- Paper chromatography is a method for separating dissolved substance from one another. Often used when the dissolved substance are coloured such as inks, food colouring or plant dyes.
- A pencil line is drawn on the paper, and spots of ink are placed on the line.
- There is a solvent usually water or ethanol in a container/beaker.
- The paper is lowered into the solvent. The solvent travels up the paper, taking some of the substances with it.
- As the solvent travels up the paper, the different coloured substances are spread apart.



Further Reading:
<https://www.bbc.com/bitesize/guides/zgvc4wx/revision/1>

