

Be REFLECTIVE: Review your learning



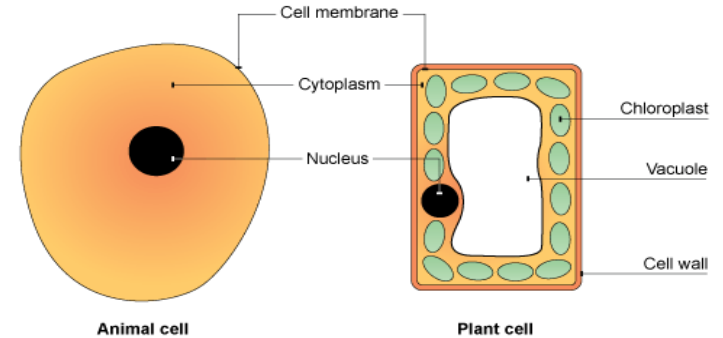
# KNOWLEDGE ORGANISER

## BIOLOGY: CELLS

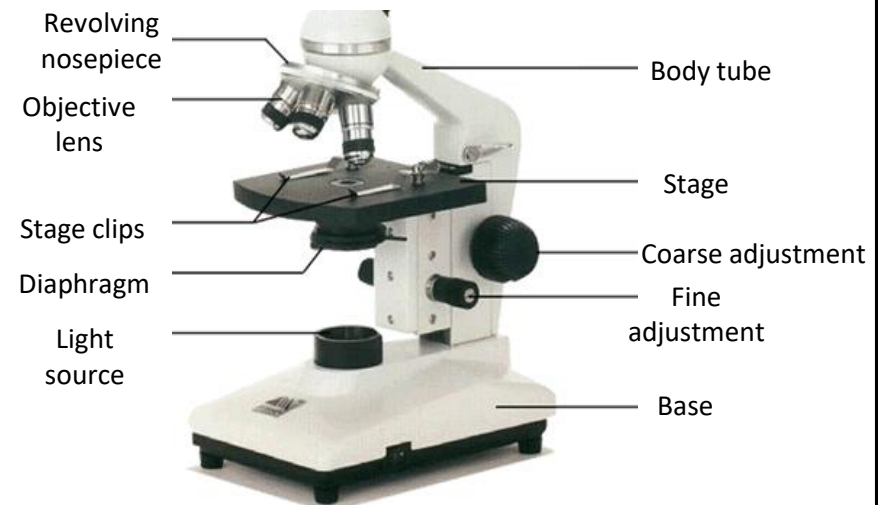
Name: \_\_\_\_\_

Key word	Definition
amoeba	A unicellular organism.
cell wall	The plant cell component that surrounds the cell, providing support.
cells	The smallest functional units in an organism – the building blocks of life.
Cell membrane	The cell component that surrounds the cell and controls movement of substances in and out.
chloroplasts	The plant cell component where photosynthesis takes place.
concentration	A measure of the number of particles of a substance in a given volume.
Cytoplasm	Jelly like substance in cells where most chemical processes happen
diffusion	The movement of liquid or gas particles from a place of high concentration to a place of low concentration.
euglena	Unicellular organism that performs photosynthesis.
flagellum	A tail-like structure that allows euglenas to move.
leaf cell	The plant cells that contain chloroplasts, where photosynthesis takes place.
microscope	An optical instrument used to magnify objects, so small details can be seen clearly.
nerve cell	An animal cell that transmits electrical impulses around the body.
nucleus	The cell component that controls the cell and contains genetic material.
observation	Carefully looking at an object or process.
organisms	Living things.
red blood cell	An animal cell that transports oxygen around the body.
root hair cell	A plant cell that takes in water and minerals from the soil.
specialised cell	A cell whose shape and structure enable it to perform a particular function.
sperm cell	A cell containing male genetic material.
unicellular	Consisting of just one cell.
vacuole	The plant cell component that contains cell sap and helps to keep the cell firm.

### Animal 'V' Plant Cells



### Microscopes



**Total magnification = magnification of eye piece lens x magnification of objective lens**


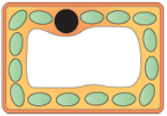
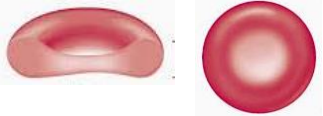
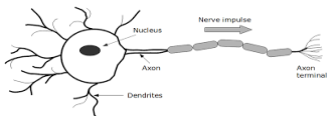


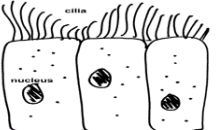
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## BIOLOGY: CELLS

Name: \_\_\_\_\_

Type of plant cell	Function	Special features
Root hair cell 	To absorb water and minerals	Large surface area
Leaf cell 	To absorb sunlight for photosynthesis	Large surface area Lots of chloroplasts
Type of animal cell	Function	Special features
Red blood cells 	To carry oxygen	Large surface area, for oxygen to pass through. Contains haemoglobin, which joins with oxygen
Nerve cells 	To carry nerve impulses to different parts of the body	Long Connections at each end. Can carry electrical signals
Female reproductive cell (egg cell) 	To join with male cell, and then to provide food for the new cell that's been formed	Large Contains lots of cytoplasm
Male reproductive cell (sperm cell) 	To reach female cell, and join with it	Long tail for swimming. Head for getting into the female cell
Ciliated Cells 	The hairs sweep hair, mucus, trapped dust and bacteria up to the back of the throat where it can be swallowed	Hair like structures Present in many structures e.g. ear, nose, trachea

### Movement of substances

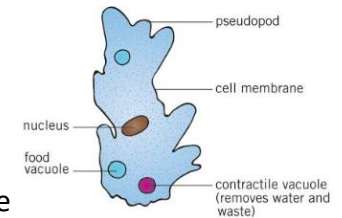
Substances move from an area where they are in high concentration to an area where they are in low concentration. This process is called **diffusion**.

Oxygen diffuses into cells from an area of high concentration outside the cell to a low concentration of oxygen inside the cell. Carbon dioxide moves out of the cell.

Water moves into a plant from a high concentration of water in the soil to a low concentration of water in the root hair cells.

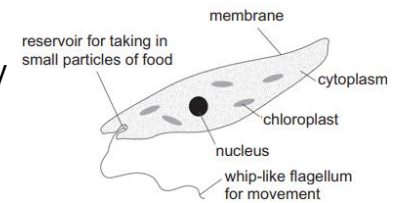
### Unicellular Organisms

Amoebas and Euglenas are examples of unicellular organisms. This means that they are only made up of one cell.



**Amoeba**

Both organisms reproduce by binary fission.



**Euglena**

Amoebas have to find food to survive but Euglenas can carry out photosynthesis to produce their own food.