

THE TROUBLE WITH BEING SO PRIMITIVE IS THAT YOU HAVE TO SAY **EVERYTHING** IN TWENTY-FIVE WORDS OR LESS.



Biology Bridging the Gap

Key Word	Definition
Magnification	The number of times greater an image is than the object.
Resolution	The ability to distinguish two separate points that as distinct from each other.
Staining	The use of a chemical or computer imaging to provide contrast between different parts of a cell for identification.
Ultrastructure	The detailed structure of the internal components of cells as revealed by the electron microscope rather than by the light microscope.
Mitosis	Nuclear division that results in the formation of two cells that are genetically identical to the parent cell.
Meiosis	Nuclear division that results in the formation of four cells that each containing half the number chromosomes of the parent cell (Haploid)
Chromosome	A Linear DNA molecule wrapped around histone proteins found in the nucleus.
Gene	A short sequence of DNA that carries the code for the synthesis of one specific polypeptide (protein)
DNA	Deoxyribonucleic acid – a polymer of nucleotide molecules that form the instructions for the synthesis of proteins found within organisms.
Mitochondria	A membrane bound organelle responsible for the generation of ATP molecules by aerobic respiration.
Rough Endoplasmic Reticulum (REM)	A membrane bound organelle covered with ribosomes - the site of protein synthesis.
Flagella	Protein based structure that extends from the membrane and is involved in moving the cell itself through a medium.
Prokaryotic	A single celled organism that does not contain a true nucleus.
Eukaryotic	A organism consisting of cells that contains a true nucleus and membrane bound organelles.
Hydrophilic	Associating with water molecules easily (water loving)
Hydrophobic	Water repelling molecules (water hating)
Channel Proteins	A protein pore that spans the membrane, through which very small ions and water soluble molecules may pass.

Key Word	Definition
Diffusion	The net movement of molecules or ions in a gas or liquid from an area of high concentration to an area of lower concentration.
Osmosis	The movement of water molecules from a region of high water potential to a region of lower water potential across a partially permeable membrane.
Active Transport	The movement of substances across membranes against a concentration gradient, requires the use of energy in the form ATP via transport proteins.
Facilitated Diffusion	The passive movement of molecules across membranes down a concentration gradient, aided by transport proteins.
Enzyme	A globular protein molecule with 3D structure that acts as a biological catalyst.
Specific	The particular shape of a molecule.
Complementary	When two molecules have (matching) shapes which allow them to bind together (Lock and Key)
Target Cell	A cell with specific receptors on the cell surface membrane which can receive a signal molecule (like a hormone).
Endocytosis	The process of taking materials into a cell by surrounding them with part of the plasma membrane, which then pinches off to form a vesicle inside the cell. This is an active process requiring ATP.
Exocytosis	The process of removing materials from a cell by fusing vesicles with the plasma membrane. This is an active process requiring ATP.
Phagocytosis	Endocytosis of large solid materials such as microorganisms or cell fragments.
Zygote	Diploid cell made from fusion of male and female gametes.
Differentiation	The development and changes seen in cells as they mature to form specialised cells.
Tissue	A group of similar cells that perform a particular function.
Organ	A collection of tissues that work together to perform a specific overall function or set of functions.
Metabolism	All the chemical reactions that take place in the cells of an organism.
Surface Area	The outside surface of an organism or cell.
Surfactant	A chemical that can reduce the surface tension of a film of water.
Smooth Muscle	A type of muscle (involuntary muscle) found mostly in certain internal organs and involved in involuntary movements such as peristalsis.
Elastic	Ability to stretch and recoil.

Key Word	Definition
Surface area to volume ratio	The surface area of an organism compared with its overall volume.
Respiration	The process in which energy is released from complex molecules, such as glucose, within a cell and transferred to molecules of ATP.
Atrium	One of the upper chambers in the heart.
Ventricles	The lower chambers in the heart.
Coronary Arteries	Arteries that carry blood to the heart muscle.
Hydrostatic Pressure	The pressure created by a fluid pushing against the sides of a container.
Diastole	The period when the heart muscles in the ventricles are relaxing and blood pressure is at its lowest.
Systole	The stage in the heart cycle when heart muscles contract to pump blood.
Sinoatrial Node	A region in the right atrium from which the wave of excitation is initiated.
Peristalsis	Muscular contractions of muscle layers of gut to squeeze food along.
Lumen	A cavity found on the inside of a vessel eg in xylem vessels or blood vessels.
Oxygen Tension	The amount of oxygen in the air expressed as the pressure created by the presence of oxygen (measured in kilopascals.)
Xylem	A plant tissue containing vessels that are used to transport water (and dissolved minerals) in a plant and to provide support.
Phloem	A plant tissue containing vessels that are used to transport dissolved sugars and other substances.
Endodermis	A ring of cells between the cortex of the root and the area housing the xylem and phloem in a plant.
Cambium	Plant tissue in the stem and root that contains dividing cells
Plasmodesmata	A fine strand of cytoplasm that links the protoplasm of adjacent plant cells through a thin area of cell wall called a pit.
Transpiration	The loss of water vapour from the aerial parts of a plant due to evaporation.
Xerophytes	A plant specially adapted to living in dry areas.

Well Done!