

BIOLOGY TERMS

Abiotic (factors)	Non-living (factors) that effect a habitat
Active Immunity	When the body produces its own antibodies
Active site	Place where substrate fits onto enzyme
Active Transport	Movement across a semi-permeable membrane against the concentration gradient which requires energy
Adaptations	Features that help an organism to survive in its environment
Adhesion	Force of attraction between water molecules and xylem walls
Adverse external environment	Surroundings that are harmful to an organism
Aerobic	(Respiration that) requires oxygen
Afterbirth	The expulsion of the placenta after the baby
Alleles	Different forms of a gene
Amnion	A membrane (or sac) that surrounds the embryo
Anabolic reactions	Reactions synthesising more complex substances
Anaerobic	(respiration that) does not require oxygen
Antagonistic pair	Two muscles that work against each other e.g. biceps and triceps
Antibiotic	Substance produced by micro-organisms (or bacteria or fungi) that kills micro-organisms (or bacteria or fungi)
Antibiotic resistance	Bacteria not killed by antibiotics
Antibody	Defence protein produced in response to antigen or destroys antigen or or produced by lymphocytes
Anti-codon	Group of three bases on tRNA
Antigen	foreign protein that causes immune reaction/antibody production
Appendicular Skeleton	Consists of pelvic and pectoral girdles and limbs
Asepsis	Prevention of contamination (by pathogens)
Autotrophic	Make their own food
Auxin	A growth regulator in plants
Axial Skeleton	Consists of skull, vertebrae, ribs and sternum
Balanced diet	Contains all the nutrient types in the correct proportions (depending on a persons sex, occupation, size, etc.)
Batch process	Reactants added, allowed to react, products removed, bioreactor cleaned, start again
Bioprocessing	The use of cells or enzymes to produce commercially useful substances
Bioreactor	Vessel with a controlled environment in which useful products are made by cells (or micro-organisms)
Biosphere	Thin layer on earth's surface that supports life (NOT global ecosystem)
Biotic Factor	Living factor (one organism's influence on another organism) (NOT examples)
Blastocyst	Fluid-filled (or hollow) ball of cells
Blood pressure	Force exerted by blood. Pressure required to stop blood flow.
Bulb	Leaves (or bud) modified for storage. A perennating organ
Cancer	Group of disorders in which body loses control of normal regulation of mitosis
Carnivore	Eats animals
Carpel	Female part of the flower that consists of stigma, style and ovary
Catabolic	Breaking down complex molecules into simpler molecules
Cell continuity	All cells are derived by the division of other cells

Central Nervous System (CNS)	Consists of brain and spinal cord
Chemosynthetic (Bacteria)	Make their own food using chemical reactions
Chemotropism	A growth response in plants in response to a chemical
Climatic Factor	Relating to weather
Codon	Group of three bases on mRNA
Cohesion	Force of attraction between (water) molecules
Community	All the organisms living in an area
Competition	Struggle between organisms for resource in short supply
Conservation	The wise management of the environment or of organisms
Contest competition	Struggle for a resource where one organism gets all of the resource while the other organism gets none.
Continuous flow	Reactants added to bioreactor over a period of time and products removed over a period of time.
Contraception	Prevention of fertilisation or conception or implantation or pregnancy
Contractile	It can shorten (or contract)
Control	(Setup for) comparison
Cross pollination	Pollen from one plant goes to another
Cytoplasm	All of the cell except nucleus, cell wall and large vacuole
Cytosol	Cytoplasm minus organelles. The liquid part of the cytoplasm
Data	Measurements or observations or information gathered
Decomposers	Microorganisms or organisms that return nutrients to the environment by decay
Deficiency disease	Disease associated with the lack of a particular vitamin
Denatured Enzyme	An enzyme which has lost its ability to function due to change in shape of active site.
Diastole	Period of relaxation when heart fills
Dicot(yledon)	Two embryonic leaves or two seed leaves in seed
Diffusion	Movement of molecules from area of high concentration to area of low concentration (NOT examples)
Digestion	The breakdown of food into smaller particles that can be absorbed
Diploid	A nucleus having two sets of chromosomes (NOT having pairs)
Disaccharide	Made up of two sugar units
DNA Replication	Making a copy of DNA
Dominant	An allele that is always expressed if it is present. OR The allele which is expressed when organism is heterozygous.
Dominant	The gene which is expressed in the heterozygous condition
Dormancy	Period of reduced metabolism or period of no growth.
Double fertilisation	In plants one male gamete fuses with the egg cell to form a diploid zygote, the other fuses with the polar nuclei to form the triploid endosperm
Ecology	Study of the inter-relationships of plants, animals and their environment
Ecosystem	Organisms [or plants + animals NOT singular] and their interactions with the environment
Ectoderm	Outer of the 3 germ layers in a mammal embryo
Ectotherm	Body temperature varies / with environmental temperature
Edaphic	To do with soil
Endocrine gland	Ductless or hormone producing
Endoderm	Inner of the 3 germ layers in a mammal embryo
Endotherm	Animal that produces its own heat and maintains a steady body temperature

Enzyme	Protein (biological) catalyst
Eukaryotic	Possesses nucleus or membrane-bound organelles
Eutrophication	Excess plant growth caused by excess nutrients
Evolution	Inheritable change in a population (or species) in response to a change in the environment / by natural selection / over time
Excretion	Removal of metabolic waste from the body
Exocrine Gland	Has a duct
Experiment	Test of hypothesis
Expression	The activation of the inserted gene or the production of product
Fat	Lipid solid at room temperature
Fauna	Animals (NOT examples)
Feedback(Negative)	When the level of one hormone inhibits the production of another (or itself)
Feedback(Positive)	When the level of one hormone increases the production of another
Fermentation	Anaerobic / respiration or respiration / that produces alcohol or lactic acid
Fertilisation	Fusion of male and female gametes to form a diploid zygote
Flora	Plants (NOT examples)
Food Chain	A list showing energy transfer from one organism to another
Food Web	Interconnected food chains or more than one species at each trophic level
Gamete	Haploid male or female sex cell
Gene	Unit of inheritance or length of DNA that codes for a protein
Gene expression	When a gene is switched on and produces its characteristic or protein
Genetic Engineering	Manipulation or alteration of an organisms genes or genotype
Genetic Screening	Testing (people) for the presence or absence of a specific gene
Genotype	Genetic make-up/combination of genes
Geotropism	Plant growth response to gravity
Germ Layer	Layer of cells in the blastula with potential to give rise to specific tissues or organs
Germination	Growth of seed into new plant
Glomerular Filtrate	Plasma that has entered Bowman's capsule or has left the glomerulus or plasma less proteins
Grey Matter	Consists mostly cell bodies and dendrites
Habitat	Place where a species (or an organism) / lives [NOT plants or animals by themselves]
Haploid	A nucleus / having one set of chromosomes
Herbivore	Eats plants
Heredity	Passing of genetically controlled characteristics from parents to offspring
Heterotrophic	Obtains food from other organisms or does not make its own food
Heterozygous	Alleles that are different
Homeostasis	Maintenance of a constant/stable internal environment
Homologous chromosomes	Chromosomes which are the same size and shape containing genes for same traits
Homologous structures	Same basic structure modified for different functions
Homozygous	Identical alleles. Alleles the same
Hormone	Chemical messenger produced in small quantities by an endocrine gland and transported around entire body in blood but only effects target organs.
Hydrotropism	Plant growth response to water
Hypha	A filament (single strand of fungus)

Hypothesis	Educated guess to explain an observation
Immobilisation	Attached to an inert substance or fixed to each other or trapped
Immobilised	Trapped in a bead or sheet made of calcium alginate gel
Immunisation	Protecting a population (patient) against a specific pathogen by vaccination or injection of a particular antibody
Immunity	Resistance to / infection or antigens [allow disease]
Implanted	Attached to or embedded in / the endometrium
Incomplete dominance	Phenotype of heterozygous individual is intermediate between the two characteristics
Independent Assortment (Law of)	Either member of a pair of alleles / can combine with / either member of another pair of alleles / in gamete formation
Infertility	Inability to conceive
Interneuron	Connects sensory and motor neuron in spinal cord
In-vitro Fertilisation	Fusion of gametes (sperm and egg) outside the body
Isolation	Removal of a gene or piece of DNA or plasmid
Junk DNA	Non-coding DNA
Key	A guide to identification
Law	Theory that has withstood long term testing
Ligation	Joining of DNA (or plasmid or gene)
Linkage	Genes on the same chromosome
Lipase	An enzyme that digests lipids
Lipid	Glycerol + 3 fatty acids
Locus	Point on a chromosome where a gene is found
Meiosis	Division of a diploid cell to give to give four haploid daughter cells
Meristem	Plant tissue where rapid cell division occur, responsible for growth.
Mesoderm	Middle of the 3 germ layers in a mammal embryo
Metabolism	All the chemical reactions / in a living cell or body
Mitosis	Division of a cell to give two identical daughter cells
Monocot(yledon)	Having one seed leaf
Monosaccharide	Made up of single sugar units
Morula	In mammals when the zygote develops into a solid ball of cells
Motor Neuron	Carries impulse / from CNS to effector
mRNA	Messenger RNA carries information from gene to ribosome
Mutation	Change in / genetic makeup or in DNA
Mutualism	Close association between two species where both benefit e.g. bacteria in large intestine get nutrients and give vitamins B and K
Mycelium	A mass of / hyphae
Negatively (geotropic)	Grows away from (gravity)
Neuron	Nerve cell
Neurotransmitter	Carries impulse / across synaptic cleft / triggers impulse in next neuron
Niche	Role of organism / in an ecosystem
Nitrification	Ammonia to nitrites (or to nitrates) or nitrites to nitrates
Nitrogen fixation	Atmospheric N ₂ converted to compound (nitrate)
Nutrient Agar	Jelly with additives (food) to provide a medium for growth
Nutrient Medium	Material supplying food or material allowing growth

Nutrient recycling	Returning elements to the environment so they can be reused
Oil	Lipid liquid at room temperature
Omnivore	Eats plants and animals
Optimum pH	pH at which enzyme works best
Optimum	Temperature or pH at which the enzyme works best
Organ	Group of tissues carrying out a common function
System	Group of organs carrying out a common function
Osmosis	Movement of water from an area of high water concentration to an area of low water concentration across a selectively permeable membrane
Ovulation	The release of the egg from the ovary
Parasitic	Living in or on another species / causing harm
Passive Immunity	Antibodies introduced to body
Passive Transport	Movement across a semi-permeable membrane with no (added) energy required
Pathogenic	Disease-causing
Percentage cover	Percentage of habitat covered by a species
Percentage frequency	Percentage of quadrats in which a species is present
Peripheral Nervous System	Consists of sensory receptors, sensory and motor neurons
Peristalsis	Muscular activity or description e.g. contractions to move food
Phenotype	Physical appearance or expression of genotype or result of genotype + environment
Phospholipid	2 fatty acids and a phosphate attached to glycerol
Photosynthesis	Conversion of light energy into chemical energy using CO ₂ , H ₂ O and Chlorophyll
Phototropism	Plant growth response to light
Placenta	Tissue formed from the mother's and embryo's tissue
Plant Growth Regulator	Substance that controls the growth of a plant
Plasma	Liquid part of blood
Poikilothermic	Animal whose body temperature varies with that of the environment
Pollination	Transfer of pollen from anther to stigma
Pollution	Any harmful addition to the environment
Polysaccharide	Made up of many sugar units
Population	All the members of a species living in an area
Positively (phototropic)	Grows towards (light)
Predation	Killing (or catching) and eating another animal
Predator	Animal that kills and eats other animals
Prey	Animal that is killed and eaten
Producer	Organism that makes its own food (from inorganic materials)
Prokaryotic	Have NO nuclear membrane or membrane bound cell organelles
Protease	An enzyme that digests proteins
Protoplasm	All of cell including membrane except large vacuole in plants
Pulse	Expansion of artery or due to pumping of heart or rate at which heart beats
Pyramid of Numbers	Diagram that shows numbers of organisms at each trophic level
Qualitative (Survey)	Types (or Species) of organisms present
Quantitative	Numbers of individuals (of a species) present
Recessive	The allele which is NOT expressed when heterozygous OR An allele which is only expressed if it is homozygous.

Reflex Action	Automatic response to an external stimulus not controlled by brain
Replicate(s)	Repeats of an experiment
Restriction	Cutting DNA or plasmid (NOT gene) with a restriction enzyme
Saprophytic	Living on / dead organisms (organic matter)
Scramble Competition	Each organism gets some of resource
Secondary Sexual Characteristics	Anatomical features that develop at puberty under the influence of sex hormones
Segregation (Law of)	Only one member of a pair of alleles enters a gamete
Selective Permeability	Allowing some substances to pass through
Self pollination	Pollen from one plant is transferred to a stigma on the same plant
Semen	Sperm cells plus seminal fluid
Sensory Neuron	Carries impulse to CNS
Sex Linkage	Gene located on a sex (or X or Y) chromosome
Species	A group of organisms which can interbreed to produce similar fertile offspring
Specificity	(Enzyme) only acts on one particular substrate
Stain	Substance that makes cell structures easier to see
Stamen	Male part of the flower consists of filament and anther
Sterile	No living things/micro-organisms present
Substrate	Substance the enzyme acts on
Symbiosis	Close physical relationship between (different) species in which at least one benefits
Symbiotic Bacteria	Bacteria that live in or on another organism involving benefit
Systole	Period of contraction when heart empties
Theory	A supported (tested) hypothesis
Thigmotropism	A plant's growth response to touch
Tissue	Group of similar cells with common function
Tissue Culture	Cells (NOT tissue) grown on or in a medium outside organism
Trace Element	Mineral element needed in small quantities.
Transcription	Making of mRNA using the DNA template
Transformation	Uptake of DNA (or plasmid or gene)
Translation	Making a protein using mRNA code
Triglyceride	Fat unit of glycerol and three fatty acids
Triplet	Group of three bases on DNA which code for an amino acid
tRNA	Transfer RNA brings specific amino acids to the ribosomes
Trophic level	Feeding level or position in food chain
Tropism	Growth of a plant in response to a stimulus
Tuber	Stem storage and perennating organ
Turgor	Pressure against the cell wall caused by the cell membrane pushing against the cell wall due to it being full of water
Ureter	Tube from kidney to bladder
Urethra	Tube from bladder to outside which carries urine (and semen)
Vaccination	The act of artificially administering an antigen that produces active immunity
Variation	Difference between members of species or population
Vegetative Propagation	Production of new plant from root (or stem or leaf) or plant asexual reproduction
White Matter	Contains mainly myelin or few cell bodies