

**LITERACY
ACROSS THE
CURRICULUM**

SUBJECT TERMINOLOGY FOR BIOLOGY



The
Appleton
School

Abdomen The part of the body containing most of your digestive system

Abiotic factor Any part of an environment or habitat that is non-living

Acid rain When rain falls and is acidic rather than neutral.

Active site The region of an enzyme which binds to the substrate

Active transport The movement of substances across a cell membrane AGAINST a concentration gradient which requires energy

Adaptation Changes in an organism to help them suit their environment

Addicted When a person feels that they must take a drug or substance

ADH A hormone that causes water to be reabsorbed by kidneys

Adrenal gland The gland that releases adrenaline

Adrenaline A hormone released as part of the 'fight or flight' response in mammals.

Aerobic In the presence of oxygen

Aerobic respiration Respiration in the presence of oxygen

Alcohol (in Biology) A chemical used as a drug or as a fuel

Allele A version of a gene

Alveoli Microscopic air sacs found in the lungs of mammals

Amino Acid A small molecule which polymerises to form a protein

Anaerobic In the absence of oxygen

Anaerobic respiration In the absence of oxygen

Anaesthetic A drug that stops all pain.

Antibiotic A group of drugs that kill bacteria only

Antibody A protein released by white blood cells to bind to and destroy pathogens.

Antigen A protein found on the outside surface of a pathogen with a specific shape

Antitoxin A protein released by white blood cells to neutralise harmful toxins that might be released by invading pathogens

Artery A vessel that carries blood away from the heart

Artificial selection Reproduction in organisms that is controlled by humans

Asexual reproduction Reproduction that involves only one parent organism

Atherosclerosis A condition characterised by a build up of fatty deposits in arteries

Atrium The smaller chamber of the heart

Atrium (atria) The smaller chamber of the heart

Auxin A plant hormone involved in growth

Axon The extended part of a neurone which electrical impulses travel along

Bacteria A single celled microorganism

Benign Describing a non-cancerous tumour that will not spread

Bile A substance from the liver used to help digest fats

Binary fission A type of asexual reproduction.

Biodegrading When a substance is broken down by microorganisms

Biodiversity The measure of diversity of life within an area.

Biomass The cellular mass of living or recently dead organisms.

Biotic factor A living organism that affects another living organism

Bladder Where urine is stored in the body

Blind trial Drug trial where the patient does not know if they have been given the placebo or not.

BMI Body Mass Index

Breathing Taking air in and out of the lungs

Cancer A disease where cells grow out of control

Capillary A blood vessel that is only one cell thick

Carbohydrate A compound containing carbon, hydrogen and oxygen

Carbon cycle The recycling of carbon in nature

Carbon monoxide A poisonous gas

Cell (in Biology) The smallest independent component of a living organism.

Cell membrane The structure surrounding every cell that controls what enters and exits the cell.

Central nervous system The brain and spinal cord collectively.

Chlorophyll A green pigment in chloroplasts that helps a plant to photosynthesise

Chloroplast An organelle in a plant that contains chlorophyll

Cholesterol A biological molecule made from fats and used in cell membranes

Chromosome A long strand of coiled up DNA.

Cilia Microscopic hair-like structures that are found on ciliated cells.

Clone An organism that is genetically identical to its parent or siblings

Competition What occurs between organisms for natural resources.

Cones Receptor cells in the eye

Conservation The act of protecting an ecosystem or species

Coronary artery An artery that delivers blood to the heart

Cross pollination When pollen from one plant fertilises the ovum from another plant.

Cystic fibrosis An inherited disease causing excess mucus build up in the lungs, resulting from inheritance of two recessive alleles.

Daughter cells The cells produced from cell division

Decay To rot or break down

Decomposer A microorganism that causes decay

Deficiency A shortage of something

Denatured What happens to an enzyme when it loses the specific shape of its active site

Deoxygenated Referring to blood that does not have oxygen bound to it

Diabetes A disease that affects someone's ability to control their blood sugar levels

Diet Describing all of the different foods eaten by an organism.

Diffusion The random movement of gas or liquid particles from an area of high concentration to low

Diploid Having two copies of each chromosome

Disease A general name for a condition that causes your body to not work as well as it should

DNA The molecule found in all living organisms that stores the information on how to make that organism.

DNA fingerprinting The process of comparing DNA samples to identify individuals

Dominant Referring to an allele that will be expressed when only one copy is inherited

Double blind trial A medical experiment where neither the patient or the doctor knows who has the active drug and who has the placebo.

Double helix The structural shape of a molecule of DNA

Down's Syndrome A disorder caused by having an extra chromosome

Drug A substance that affects how your body works

Drug testing The process through which a drug is tested for safety and suitability

Ecosystem All of the living things in one area or environment

Effector A muscle or gland stimulated by a motor neurone

Embryo transfer A procedure that implants fertilised embryos into other organisms to increase the number of identical offspring

Environmental variation Differences between individuals that are a result of their environment

Enzyme A biological catalyst that speeds up the rate of metabolic reactions

Epidermis The outermost tissue layer on a plant leaf

Ethene A plant hormone that speeds up ripening of fruit

Eukaryotic A type of cell that has the genetic material in a nucleus

Eutrophication When microscopic plants grow to excessive amounts within water as a result of excess nutrients

Evolution The process that causes organisms to change from one species to another over a long time

Excretion The removal of waste products of chemical reactions from an organism

Extremophile An organism that can survive in extreme conditions

Fat A part of a balanced diet used as a store of energy

Fatty acids Produced by the digestion of fats by bile

Fertilisation The process of a male sex cell joining with a female sex cell

Fertilisers A chemical that helps plants grow

Flaccid When a plant cell has lost water.

Follicle stimulating hormone (FSH) A hormone that is involved in the menstrual cycle in females

Food chain A diagram showing the direction of energy flow when animals feed

Food web A more complicated food chain - it shows what eats what in a habitat

Fossil Remains of a plant or animal that died a long time ago

Gamete A sex cell such as sperm, egg (ovum) or pollen

Gene A short section of DNA that codes for a specific order of amino acids to make a protein

Genetic engineering The process of inserting a gene from one organism into the DNA of another

Genetic variation Variation in features due to genes

Gibberellins Plant hormones that cause stem elongation, germination and seed dormancy

Gland An organ that produces a useful chemical or hormone for the body

Glucose The product of photosynthesis in plants and the molecule used in respiration

Glycogen A molecule found in animals that acts as a store of glucose

Habitat A place where an animal or plant lives

Haemoglobin A protein in red blood cells that binds with oxygen

Haploid Half the number of chromosomes needed by an organism to develop into an adult

Heart An organ that pumps blood

Herbicide A weedkiller

Heterozygous When an individual has two different forms of a gene (alleles)

Homeostasis Keeping internal conditions constant

Homozygous When an individual has two of the same form of a gene (allele)

Hormone Chemicals (released from glands in mammals) that travel around the body to target organs to bring about a response

Huntington's disorder An inherited disorder of the nervous system

Hypothermia When your body temperature falls below 35 degrees centigrade

Immunity When your body stops you from catching an infection

In vitro fertilisation (IVF) The process of fertilising an egg with a sperm in a laboratory before implanting into a female's uterus.

Infection When your body catches a disease

Inherited characteristic A characteristic that has been passed on by parents to their offspring through genes

Inherited disease A disease that an organism inherits from their parents through the genes

Insulin A hormone that lowers blood glucose levels

Iris A part of the eye that controls the size of your pupil

Kidney dialysis An artificial procedure where the blood is filtered outside of the body

Lactic acid A product of anaerobic respiration in animal cells (and some plant cells).

Leutenising hormone (LH) A hormone involved in menstruation

Limiting factor Any condition that prevents the rate of a reaction from increasing

Lipid A fat or oil

Lymphocyte A type of white blood cell that can produce antibodies

Malignant A type of tumour that can spread and cause harm

Mass extinction A period of time in the Earth's history when large numbers of species die out

Medulla (oblongata) A part of the brain that controls vital functions

Meiosis A type of cell division that results in sex cells or gametes with half the number of chromosomes

Menstruation The monthly process of loss of blood and tissue from the vagina - also known as periods

Metabolism All chemical reactions taking place within an organism

Mitochondrion A part of the cell (organelle) where respiration occurs

Mitosis Cell replication that produces a genetic copy of the original cell, or clone

Monoclonal antibodies Identical antibodies produced by clones of one cell

Motor neurone A specialised cell that transmits electrical impulses to an effector

Mutation A random change in DNA

Natural selection A process that drives evolution by favouring only the best adapted individuals

Negative feedback A change in the body that occurs in the opposite direction to a change in the internal or external environment

Nephron Part of the kidney where water and ions are reabsorbed by the body

Nucleotide The single component part of DNA

Nucleus The part of a cell that controls what the cell does.

Oestrogen A sex hormone produced in ovaries involved in puberty and menstruation

Organelle A component found inside a cell

Osmosis Movement of water molecules from an area of higher concentration to lower concentration, across a partially permeable membrane

Oxygen debt The amount of oxygen required to break down lactic acid

Palisade mesophyll tissue A tissue found near the upper surface of a leaf

Partially permeable Referring to a membrane that will only let some particles through based on size

Pathogen A microorganism that makes the body ill

Phenotype Referring to the physical characteristics of an organism

Phloem The living transport vessel in plants that transports sugars

Photosynthesis The chemical reaction in plants that converts light energy into chemical energy

Pituitary gland A gland in the brain that produces lots of hormones

Placebo A fake drug used in drugs trials

Population Total number of all organisms of the same species living within one area

Producer The organism found at the first stage of a food chain or web

Progesterone A female sex hormone

Prokaryotic A type of cell that does not have the genetic material in a nucleus

Protein A molecule made of amino acids

Pyramid of biomass A diagram that shows the amount of living energy at each stage of a food chain

Quadrat A piece of equipment used to measure the biodiversity of an area

Receptor A specialised cell that detects a stimulus and transfers it to a sensory neurone

Recessive Referring to an allele that will only be expressed if inherited from both parents

Reflex arc A neuronal pathway that does not require the brain to bring about the response

Relay neurone A neurone that connects two others

Respiration The chemical process that occurs in most living cells to release energy

Ribosome The site of protein synthesis inside a cell

Selective breeding The process where humans select two individuals and get them to mate to produce offspring

Sensory neurone A neurone that receives information from a receptor cell

Sexual reproduction Occurs in species that produce gametes which fuse together during fertilisation

Speciation The process of forming a new species

Species The lowest level of classification

Spongy mesophyll The tissue found in leaves where gas exchange takes place

Stem cell An undifferentiated cell that can develop into any specialised cell

Stent A device inserted into a coronary artery to keep it open

Stomata The openings found on the underside of a leaf that allow gases into and out of the leaf

Substrate The molecule(s) that bind with an enzyme's active site and convert to the product(s)

Synapse The junction between two neurones

Testosterone A male sex hormone

Thyroid gland A gland that produces thyroxin

Transcription The process of copying a DNA sequence to RNA

Transect A line that can be used to measure biodiversity

Translation The process of converting an RNA sequence into a chain of amino acids (protein)

Translocation The movement of sugars to areas of the plant that need them

Transpiration The diffusion of water vapour out of the leaves of plants

Transplant Removal of an organ or tissue from one person (donor) and placement in another person (recipient)

Trophic level A stage in a food chain represented by one organism

Tubal Ligation Medical procedure in which the fallopian tubes/oviducts are cut or blocked to prevent the movement of an egg into the fallopian tube.

Turgid When a plant cell is full of water

Type I diabetes A condition caused by the body destroying its own insulin producing cells in the pancreas

Type II diabetes A condition caused by the liver becoming insensitive to insulin

Urea The waste product from the breakdown of excess protein, excreted in the urine.

Vaccine A medicine that contains a dead or inactive form of a pathogen that is inserted into the body

Variation Differences between individuals within a species or between species

Vasectomy A medical procedure in which sperm ducts are cut or blocked. This acts as a contraceptive method.

Vasoconstriction The narrowing of a blood vessel to reduce bloodflow to an area

Vasodilation The widening of a blood vessel to increase blood flow to an area

Vector An organism that can spread disease

Vein A blood vessel that returns blood to the heart

Ventilation The physical act of filling (inhalation) and emptying (exhaling) the lungs with air

Ventricle The larger of the two types of chambers found in the heart, located below the atria

Villi Microscopic finger-like projections found on the surface of some cells

Xylem Dead columnar cells that form tubes to transport water and minerals through plants

Yield The amount of an agricultural product produced

Zooplankton Tiny animals found in the sea and fresh water