

Terminology

Terminology is a general word for the group of specialized words or meanings relating to a particular field, and also the study of such terms and their use.

Biological terms are sometimes **difficult** to understand, but **most** of the words can be **broken** into **parts** using their **root** words and by utilizing their **prefixes** and **suffixes**.

As students of **biology**, you should **learn to recognize** word parts, since they often give a **clue** as to the meaning of a word.

Science terminology is based on **Latin** and **Greek** language. Roots like “**bio**” which means “**life**” maybe found at the beginning of a word, at the end of a word or stands alone. Roots **followed** by a **hyphen** are **prefixes**. Roots **preceded** by a **hyphen** are **suffixes**. For example “**logy**” is a Greek word which means “**the study of**”, therefore the word “**biology**” means “**the study of life**”.

Here are few more example:

Prefix/ suffix	meaning	example	Meaning of the example
A- / an-	Without/ not	<ul style="list-style-type: none"> • Abiotic • anaerobic 	<ul style="list-style-type: none"> • Without life • Not aerobic
Bi- / di-	Two	<ul style="list-style-type: none"> • Bicycle • Diploid 	<ul style="list-style-type: none"> • Two wheels • Two sets of chromosomes
Co-	Together	Coexist	Organisms living together
-cide	Kill	<ul style="list-style-type: none"> • Herbicide • Pesticide 	<ul style="list-style-type: none"> • Chemicals that kill weeds • Chemicals that kill insects
Eco-	Where one lives	Ecology	The study of where organisms live
Chloro-	Green	Chlorophyll	Green pigment in plants
-itis	Inflammation	<ul style="list-style-type: none"> • Arthritis • Laryngitis 	<ul style="list-style-type: none"> • Inflammation of the bones • Inflammation of the voice box
Micro-	Small	Microbiology	The study of small Microbes (viruses)
-ose	Sugar	<ul style="list-style-type: none"> • Glucose 	<ul style="list-style-type: none"> • Simple sugar

•		Cellulose	• Complex sugar
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Prefix	Meaning	Example
a-, an-	not, without, non, the lack of, negative.	<ul style="list-style-type: none"> • abiotic: non-living, characterized by the absence of life. • abiogenesis: the origination of living organisms from lifeless matter. • abiosis: the absence of life.
aden-	gland	<ul style="list-style-type: none"> • adenoid: related to lymphatic glands or lymphoid tissue.
anti-	against, opposed to	<ul style="list-style-type: none"> • antibody: a protein that binds to a specific antigen.
bi-	twice, double	<ul style="list-style-type: none"> • biennial: two year life span plant.
bio-	related to life	<ul style="list-style-type: none"> • biology: study of life. • biodiversity: the diversity (number and variety of species) of plant and animal life within a region. • biotechnology: the use of living organisms especially microorganisms in industrial, agricultural, medical and other technological applications. • biocycle: any cyclic biological process.
bronch-	windpipe	<ul style="list-style-type: none"> • bronchitis: inflammation of the lungs. • bronchioles: small tubes in the lungs.
chlor-	green	<ul style="list-style-type: none"> • chlorophyll: green pigment. • chloroplast: an organelle found in the cells of green plants.
chrom-	color	<ul style="list-style-type: none"> • chromoplast: any plastid in which a pigment is synthesized or stored. • chromosome: carries genetic information, in form of genes. • chromatin: a complex of DNA, RNA and proteins within the cell nucleus. • chromogen: a strongly pigmented organelle or organism.
cyto-	cell	<ul style="list-style-type: none"> • cytosol: the solution of a cell's

		<p>cytoplasm.</p> <ul style="list-style-type: none"> • cytoplasm: contents of a cell excluding the nucleus.
derm-	skin	<ul style="list-style-type: none"> • dermis: skin layer underlying epidermis. • dermatitis: inflammation of skin. • dermatogen: external skin of plants in a forming condition. • dermatology: the study of the skin and its diseases. • dermatophyte: any parasitic fungus that infects the skin.
endo-	within, in, inside	<ul style="list-style-type: none"> • endothelium: innermost layer of cells lining blood vessels. • endoskeleton: a skeleton found within the interior of the body. • endosymbiosis: a condition of living within the body or cells of another organism. • endophyte: any organism (generally bacterium, fungus or algae) that lives inside a plant.
epi-	On, above	<ul style="list-style-type: none"> • epiphyte: a plant that grows on the surface of another plant for support. • epidermis: outer layer of skin.
exo-	outside, outer surface.	<ul style="list-style-type: none"> • exoskeleton: hard outer surface that provides support and protection for an organism. • exoderm: an outer layer of skin.
hem-	blood	<ul style="list-style-type: none"> • hemoglobin: iron containing protein in red blood cells. • hematology: the scientific study of blood and blood-producing organs.
herpe-	reptile	<ul style="list-style-type: none"> • herpetology: the branch of zoology concerned with the study of amphibians and reptiles.
hyper-	above, excess, over, more than	<ul style="list-style-type: none"> • hypersecretion: excessive secretion. • hypertension: high blood pressure. • hyperthyroidism: condition resulting from the excessive production of thyroid hormones.

hypo-	under, beneath, below	<ul style="list-style-type: none"> • hypodermic: below skin. • hypoactive: less than normally active. • hypoglycemia: low blood pressure.
intra-	within, in, inside, indoors, interior	<ul style="list-style-type: none"> • intracellular: to be inside or between a cell. • intrachromosomal: occurring within a chromosome.
leuko-, luca-	white	<ul style="list-style-type: none"> • leukocytes: white blood cells.
macro-	large, big, huge	<ul style="list-style-type: none"> • macromolecule: a very large molecule. • macrophage. • macronucleus.
micro-	Small, tiny, little	<ul style="list-style-type: none"> • microorganism: a microscopic organism, especially a bacterium, virus or fungus. • microbiology: the study of small organisms.
meso-	middle	<ul style="list-style-type: none"> • mesosphere: layer of the Earth's atmosphere.
neuro-	Related to nerves	<ul style="list-style-type: none"> • neurobiology: the scientific study of nerve and brain function in people and animal. • neuritis: inflammation of nerves.
Os-, oste-, osteo-	bone	<ul style="list-style-type: none"> • osteology: study of bones. • osteocyte: a mature bone cell involved with the maintenance of bone.
proto-	first	<ul style="list-style-type: none"> • protozoa: are single celled organisms.
Suffix	Meaning	Example
-ectomy	to cut out, to remove	<ul style="list-style-type: none"> • adenectomy: surgical removal of gland. • tonsillectomy: cutting out of the tonsils.
-emia	blood	<ul style="list-style-type: none"> • anemia: a medical condition in which the capacity of the blood to transport oxygen to the tissues is reduced. • leukemia: form of cancer characterized by an abnormal increase in the

		number of white blood cells in the body.
-itis	inflammation	<ul style="list-style-type: none"> • bronchitis. • neuritis.
-logy	study	<ul style="list-style-type: none"> • cytology: study of cell. • ethology: study of animal behavior. • ecology: study of inter-relationship between living and non-living components and their environment. • phycology: study of algae. • etiology: study of cycle of pathogen. • entomology: study of insects. • histology: study of tissue with the help of microscope. • bacteriology: study of bacteria.
-osis	disease	<ul style="list-style-type: none"> • dermatosis: any disease of the skin.
-phyll	leaf	<ul style="list-style-type: none"> • chlorophyll.
-plasm	material forming cells, living substance, tissue, substance of a cell	<ul style="list-style-type: none"> • cytoplasm: contents of a cell excluding the nucleus.