

Glossary of biology

This **glossary of biology terms** is a list of definitions about the fundamentals of biology, its sub-disciplines, and related fields.

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1 A

- **Abscisic acid** - a plant hormone with the formula $C_{15}H_{20}O_4$
- **Abscission** - shedding of flowers and leaves and fruit following formation of scar tissue in a plant
- **Absolute zero** - the lowest theoretically attainable temperature (at which the kinetic energy of atoms and molecules is minimal); 0 Kelvin or -273.15 Celsius of -459.67 Fahrenheit.
- **Absorption** - a process in which one substance permeates another; a fluid permeates or is dissolved by a liquid or solid. Skin absorption is a route by which substances can enter the body through the skin.
- **Absorption spectrum** - the spectrum of electromagnetic radiation that has passed through a medium that absorbed radiation of certain wavelengths.
- **Abyssal zone** - the deep sea (2000 meters or more) where there is no light.
- **Acclimatization** - adaptation to a new climate (a new temperature or altitude or environment).
- **Acid precipitation** - rain containing acids that form in the atmosphere when industrial gas emissions (especially sulfur dioxide and nitrogen oxides) combine with water.
- **Acoelomate** - animals, like flatworms and jellyfish, that have no body cavity (coelom). Semi-solid mesodermal tissues between the gut and body wall hold their organs in place.
- **Actin** - one of the proteins into which actomyosin can be split; can exist in either a globular or a fibrous form.
- **Action potential** - the local voltage change across the cell wall as a nerve impulse is transmitted.
- **Activation energy** - the energy that an atomic system must acquire before a process (such as an emission or reaction) can occur.

- **Active site** - the part of an enzyme or antibody where the chemical reaction occurs
- **Active transport** - transport of a substance (as a protein or drug) across a cell membrane against the concentration gradient; requires an expenditure of energy
- **Adenosine triphosphate** - a nucleotide derived from adenosine that occurs in muscle tissue; the major source of energy for cellular reactions. The chemical formula for ATP is $C_{10}H_{16}N_5O_{13}P_3$
- **Adenylate cyclase** - An enzyme that catalyzes the formation of cyclic AMP from ATP.
- **Aerobic** - depending on free oxygen or air.
- **Aerobiology** - the study of organic particles, such as bacteria, fungal spores, very small insects, pollen grains and viruses, which are passively transported by the air.
- **Agriculture** - the practice of cultivating land, growing food, and raising stock.
- **Agrobiolgy** - the study of plant nutrition and growth especially as a way to increase crop yield
- **Amino acid** - a class of organic compounds containing an amino group and a carboxylic acid group
- **Amniote** - organisms that produce an egg composed of shell and membranes that creates a protected environment in which the embryo can develop out of water
- **Anatomy** - the branch of morphology that deals with the structure of animals
- **Arachnology** - scientific study of spiders, scorpions, pseudoscorpions, and harvestmen, collectively called arachnids.
- **Artificial selection** - professionals study the genotype and phenotype of parent organisms in the hope of producing a hybrid that possesses many of the desirable characteristics found in their parents. Also known as *selective breeding*.
- **Asexual reproduction** - process of reproduction involving a single parent that results in offspring that are genetically identical to the parent
- **Astrobiology** - the branch of biology concerned with the effects of outer space on living organisms and the search for extraterrestrial life
- **Atom** - the smallest component of an element having the chemical properties of the element

2 B

- **B cell** - type of lymphocyte in the humoral immunity of the adaptive immune system.
- **Bacteria** - Single-cell microscopic organisms which lack a true nucleus. They represent one of the three domains.
- **Bacteriophage** - Virus that infects and multiplies within bacteria.
- **Barr body** - the inactive X chromosome in a female somatic cell,[2] rendered inactive in a process called lyonization, in those species in which sex is determined by the presence of the Y (including humans) or W chromosome rather than the diploidy of the X or Z.
- **Basal body** - (synonymous with basal granule, kinetosome, and in older cytological literature with blepharoplast) is an organelle formed from a centriole, and a short cylindrical array of microtubules.
- **Behavioral ecology** - the study of the evolutionary basis for animal behavior due to ecological pressures.
- **Benthic zone** -
- **Bile** -
- **Binary fission** - One cell dividing into two identical daughter cells.
- **Biocatalysis** -
- **Biochemistry**-
- **Bioengineering** -
- **Bioenergetics** -
- **Biogeography** -
- **Bioinformatics** -
- **Biology** - Study of living organisms.
- **Biomass** -
- **Biomathematics** -
- **Biome** -

- **Biomechanics** -
- **Biomedical engineering** -
- **Biomedical research** -
- **Biomimetic** - See Bionics.
- **Bionics** - Application of biological methods and systems found in nature to the study and design of engineering systems and modern technology. Also known as biomimetics, biognosis, biomimicry, or bionical creativity engineering
- **Biophysics** -
- **Biotechnology** -
- **Bipedal** -
- **Blastocyst** -
- **Blood** -
- **Blood-brain barrier** -
- **Botany** - the study of plants
- **Bowman's capsule** -
- **Building biology** -

3 C

- **Cell** - the structural and functional unit of all organisms; an autonomous self-replicating unit that may exist as functional independent unit of life (as in the case of unicellular organism), or as sub-unit in a multicellular organism that is specialized into carrying out particular functions towards the cause of the organism as a whole.
- **Carbonate** -
- **Cell biology** -
- **Cell membrane** -
- **Cell nucleus** - the "control room" for the cell. the nucleus gives out all the orders.
- **Cell theory** - the theory that all living things are made up of cells.

- **Centroid** -
- **Centrosome** -
- **Chemical bond** -
- **Chemical compound** -
- **Chemical equilibrium** -
- **Chemical kinetics** -
- **Chemical reaction** -
- **Chemistry** -
- **Chloride** -
- **Chloroplast** -
- **Chromate** -
- **Chromosome** - a threadlike strand of DNA in the cell nucleus that carries the genes in a linear order
- **Conservation biology** -
- **Cryobiology** -

4 D

- **Dalton** -
- **Darwinian fitness** -
- **Deciduous** -
- **Dehydration reaction** -
- **Denaturation** -
- **Dendrite** -
- **Denitrification** -
- **Deoxyribonucleic acid** -
- **Deoxyribose** -
- **Depolarization** -
- **Desmosome** -
- **DNA** -
- **DNA replication** -
- **Dynein** -

5 E

- **Ecdysone** -
- **Ecological efficiency** -
- **Ecological niche** -
- **Ecological pyramid** -
- **Ecological succession** -
- **Ecology** -
- **Ecosystem** - an interaction of living things and non living things in a physical environment
- **Ecotype** -
- **Ectoderm** -
- **Ectotherm** -
- **Effector cell** -
- **Efferent** -
- **Egg** -
- **Electric potential** -
- **Electrochemical gradient** -
- **Electromagnetic spectrum** -
- **Electron** -
- **Electron acceptor** -
- **Electron carrier** -
- **Electron donor** -
- **Electron microscope** -
- **Electron shell** -
- **Electron transport chain** -
- **Electronegativity** -
- **Element** -
- **Embryo** - developing stage of a multicellular organism
- **Embryo sac** -
- **Embryology** -
- **Enantiomer** -
- **Endangered species** -
- **Endemism** -
- **Endemic species** -
- **Endergonic reaction** -
- **Endocrine gland** -
- **Endocrine system** -
- **Endocytosis** -
- **Endoderm** -
- **Entomology** -
- **Environmental biology** -
- **Enzyme** -
- **Epidemiology** -
- **Epigenetics** -
- **Ethology** -
- **Evolution** - the change in genetic composition of a population over successive generations, which may be caused by natural selection, inbreeding, hybridization, or mutation.
- **Evolutionary biology** -
- **External fertilization** - sperm units with egg in the open, rather than inside the body of the parents

6 F

- **Facultative anaerobe** - organism which is capable of producing energy through aerobic respiration and then switching to anaerobic respiration depending on the amounts of oxygen and fermentable material in the environment

- **Fetus** - a human embryo after eight weeks of development
- **FIRST** - For Inspiration and Recognition of Science and Technology - is an organization founded by inventor Dean Kamen in 1989 in order to develop ways to inspire students in engineering and technology fields.

7 G

- **Ganglion** -ganglion pl. ganglia

(gang-lee-un) (gang-lee-ah) [Gk. ganglion, a swelling] A cluster (functional group) of nerve cell bodies in a centralized nervous system.

- **Gene**
- **Genetics** - the study of heredity
- **Genetic variation** - variations of genomes between members of species, or between groups of species thriving in different parts of the world as a result of genetic mutation. Genetic diversity in a population or species is a result of new gene combinations (e.g. crossing over of chromosomes), genetic mutations, genetic drift, etc.
- **Gluon** -
- **Gular** -of or pertaining to the throat

8 H

- **Hadron** -
- **Hermaphrodite** - organism with both male and female reproductive organs
- **Herpetology** -
- **Histology** -
- **Hydrocarbon** -
- **Habitat**- Habitat is a place for animals, people and plants and non living things

9 I

- **Ichthyology** -
- **Immune response** -
- **Immunoglobulin** -
- **Incomplete dominance** -
- **Insulin** -
- **Interferon** -
- **Integrative biology** -
- **Interleukin** -
- **Internal fertilization** - fertilization takes place inside the egg-producing individual.
- **International System of Units** -
- **Invertebrate** -
- **Ion** -an atom or molecule with a net electric charge due to the loss or gain of one or more electrons.
- **Ionic bond** -
- **Isomer** -
- **Isotonic solution** -
- **Isotope** -

JEJUNUM : The mid-section of the small intestine of many higher vertebrates like mammals, birds, reptiles is called as jejunum. It is present between the duodenum and the ileum.

10 K

- **Krebs cycle** -

11 L

- **Lacteal** -
- **Lagging strand** -
- **Larva** -

- **Law of independent assortment** -
- **Lepton** -
- **Leukocyte** -
- **Ligament** -
- **Linked genes** -
- **Lipid** -
- **Lipoprotein** -

12 M

- **M phase** -
- **Macroevolution** -
- **Macromolecule** -
- **Macronutrient** -
- **Macrophage** -
- **Mammalogy** -
- **Marine biology** -
- **Mass balance** -
- **Mass density** -
- **Mass number** -
- **Mast cell** -
- **Medulla** -
- **Meiosis** -
- **Membrane potential** -
- **Meson** -
- **Metaphase** -
- **Microbiology** -
- **Mitosis** -

- **Molarity** -
- **Mole** -
- **Molecule** -
- **Molecular biology** -
- **Molecular physics** -
- **Muon** -
- **Mycology** -

13 N

- **Natural selection** - a process in nature in which organisms possessing certain genotypic characteristics that make them better adjusted to an environment tend to survive, reproduce, increase in number or frequency, and therefore, are able to transmit and perpetuate their essential genotypic qualities to succeeding generations.
- **Neurobiology** -
- **Neutrino** -

14 O

- **Oncology** -
- **Ornithology** -
- **Osmosis** -

15 P

- **Paleontology** -
- **Parasitology** -
- **Pathobiology** -
- **Pathology** -
- **pH** -
- **Pharmacology** -
- **Physiology** -

- **Phytopathology** -
- **Population biology** -
- **Population ecology** -
- **Population genetics** -
- **Psychobiology** -

16 Q

- **Quark** -

17 R

- **Reproduction**- Giving birth to one of its kind, sexually or asexually.

18 S

- **Sexual reproduction** - type of reproduction in which cells from two parents unite to form the first cell of a new organism
- **SI units** -
- **Sociobiology** -
- **Structural biology** -
- **Synthetic biology** -

Structure

19 T

- **Transcription** -

20 U

21 V

- **Vacuole** -
- **Valence** -
- **Valence band** -

- **Valence bond theory** -
- **Valence electron** -
- **Valence shell** -
- **Virology** -

22 W

- **White Blood Cell** - Component of the blood that functions in the immune system. Also known as a leukocyte.
- **Wood** - The inner layer of the stems of woody plants; composed of xylem.

23 X

- **Xanthophyll** - the yellow coloured photosynthetic pigments

24 Y

25 Z

- **Zoology** - Study of animal kingdom.

26 See also

- **Biology**
- **Glossary of physics**
- **Glossary of chemistry terms**

27 References

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