

Glossary

Abiotic An abiotic factor is a non-living condition that can affect where organisms live, e.g. temperature.

Absorb The process of absorbing substances into cells or across the tissues and organs through diffusion or osmosis.

Abundance The number of individuals of each species in a sample.

Acceleration Rate of change of velocity.

Acidic gases Gases in the atmosphere that can combine with rain water to produce acid rain.

Activation energy The minimum energy required for a reaction to take place.

Adaptation Adaptations enable species to survive in the conditions in which they normally live, for example, a cold climate.

Adhesion The attraction between water molecules and the xylem wall in transpiration.

Aerobic A process which takes place in the presence of oxygen.

Aerobic respiration The process of using oxygen to break down glucose to produce energy, making carbon dioxide and water as byproducts.

Air resistance Frictional force due to air particles hitting a moving object.

Alkali metals Group 1 in the periodic table, the elements lithium down to caesium. They have similar properties because they all have one electron in their outer shell.

Alkanes A homologous series of hydrocarbons with the general formula C_nH_{2n+2} .

Alleles A version of a gene.

Alloys Mixtures of metals.

Alveoli Small air sacs in the lungs that are the site of gaseous exchange.

Ammeter Instrument with virtually no electrical resistance used to measure electric currents.

Ampere Unit of electric current.

Amplitude The intensity of a wave, usually measured as the distance between the centre of the oscillation and its peak/trough.

Anaerobic A type of process which takes place in the absence of oxygen.

Anaerobic respiration The process of breaking down glucose to produce energy in the absence of oxygen, making carbon dioxide and lactic acid as byproducts.

Angina Chest pains, often brought on by exercise, as the blood supply to the muscles of the heart is restricted.

Anode The positive electrode in electrolysis. At this electrode ions lose electrons.

Antibiotic resistance When bacteria cannot be killed by some or all antibiotics.

Antibiotics Medicines that kill bacteria, or slow down their growth.

Antibody A protein that binds to a specific antigen on a pathogen.

Antitoxins Antibodies that bind to the toxins produced by microorganisms in the body.

Antiviral Medicines that kill viruses.

Aorta The artery that carries oxygenated blood away from the heart and the largest artery in the body.

Aqueous solution A solution in which the solvent is water.

Artificial heart A mechanical heart that can be used in transplants to aid or replace the heart.

Artificial pacemaker A small mechanical device that coordinates the resting heartbeat.

Artificial selection Selective breeding of organisms to produce offspring with the desired characteristics.

Asexual reproduction A form of reproduction where the offspring are clones of the parent.

Atom The smallest particle of an element that can take part in a chemical reaction.

Atomic number The number of protons in the atom of an element.

Automatic control Processes in the body, controlled by the brain, that are involuntary.

Bacteria Unicellular, prokaryotic microorganisms.

Balanced symbol equation An equation where the number and type of atoms in the reactants are equal to the number and type of atoms in the products. A balanced symbol equation is a consequence of the law of mass conservation.

Bar magnet A permanent magnet, usually shaped like a bar, or a rod.

Battery A set of electrical cells connected in series to generate a potential difference.

Behavioural adaptation Changes to a species' behaviour to help their survival, e.g. penguins huddling together for warmth.

Benign tumour A growth of abnormal cells, contained in one area, that does not invade other parts of the body.

Bias A conclusion that may be incorrect.

Bile A substance produced by the liver that emulsifies fats into smaller droplets.

Bioleaching Bacteria digest the sulfide in low-grade ores allowing the metal to separate out and be extracted.

Biomass The total mass of the individuals of a species in a given area.

Biotic Any living component that affects the population of another organism or the environment.

Bond energy The energy (in kJ/mol) required to break a covalent bond between two atoms.

Braking distance The distance a vehicle travels from the moment the brakes are applied until it stops completely.