



adaptation—structural or functional changes to an organism in response to a new condition or environment; evolutionarily speaking, the organism is better suited to reproduce and survive due to these changes.

algae (singular: alga)—simple unicellular or multicellular plants that have no vascular tissue and therefore no leaf, stem, or root systems.

amphipod—a crustacean of the order Amphipoda that includes scuds or sideswimmers that are found in most pond or mangrove water.

anoxic – depleted of dissolved oxygen

arthropod—an invertebrate animal characterized by jointed legs, a segmented body, and an exoskeleton of chitin; includes lobsters, crabs, prawn, and insects.

bacteria (singular: bacterium)—minute single-celled organisms, most of which are parasitic; bacteria are the primary organisms responsible for decay and fermentation.

bioaccumulation - Process by which certain toxic substances accumulate and keep on accumulating in living organisms, posing a threat to health, life, and to the environment.

biodegradable—having the ability to be broken down into simpler components by living organisms.

biological diversity—the diversity of life on Earth, reflected in the number and variety of species and populations, and the communities that they form.

bioremediation – the use of either naturally occurring or deliberately introduced microorganisms to consume and break down environmental pollutants, in order to clean a polluted site.

bloom—sporadic occurrence of huge populations of algae.

blue carbon – the amount of carbon captured and stored by mangroves and other tidal wetlands

brackish—salty water, but less salty than seawater.

breed—to produce young, to propagate.

burrow—a hole or passageway beneath the surface, or to make such a hole.

calls—bird vocalizations that are not songs; made during courtship, feeding, and migration, as well as to warn.

camouflage—protective colouration or shape that helps to hide an animal from its predators or prey.

carbon sequestration—the process of capturing carbon dioxide from the atmosphere, measured as a rate of carbon uptake per year

carbon storage—the long-term confinement of carbon in plant materials or sediment, measured as a total weight of carbon stored

carnivore—meat-eating animal.

cell—the basic unit of which all living organisms are composed, usually consisting of a nucleus and a mass of cytoplasm bound by a membrane.

chlorophyll—green pigment in plants that absorbs light energy needed in photosynthesis.

clutch—the number of eggs laid by a female during one nesting cycle.

cold-blooded—having a body temperature that varies with the temperature of the surroundings. For example, fish are cold-blooded.

community—a group of living organisms in a given area that interact with each other; the living component of an ecosystem.

competition—the struggle among organisms for food, space, and other requirements for existence.

conservation—the protection, management, and wise use of all living and non-living cultural and human resources.

crop—a sac at the bottom of the oesophagus in many birds used to store food for later digestion.

currents—movements of water created by winds, tides, or differences in salinity or temperature between water masses.

decomposers—organisms, primarily bacteria, that break down dead organic matter into simpler substances.

denitrification - reducing nitrates or nitrites to nitrogen-containing gases, usually by bacterial action.

detrivore—an animal that feeds on detritus.

detritus—material resulting from the decomposition of dead organic matter.

diatoms—microscopic algae with a two-part siliceous cell; important members of the phytoplankton.

dissolved oxygen—molecular oxygen present in water (not the O in H₂O.)

down—soft feathers next to a bird's body that provide insulation.

dredge—to remove sand, sediments, mangroves, etc. from the bottom using a scoop or shovel-like device or large suction pipe.

ebb tide—the movement of the tidal current away from shore; a decrease in the height of the tide.

endangered species—a species that is in immediate danger of becoming extinct.

endoskeleton—a skeleton that is produced within the body and remains embedded there.

environment—all the conditions or influences within a particular ecosystem that affect the organisms of that ecosystem.

estuary—brackish water influenced by the tides, where the mouth of the river meets the sea.

eutrophication - excessive richness of nutrients in a lake or other body of water, frequently due to run-off from the land, which causes a dense growth of plant life

excrete—to discharge.

exoskeleton—an external skeleton, like the shells of molluscs or arthropods.

extinct—no longer living. The Dodo is an extinct species.

fauna—all the animals living in a particular place.

filter-feed—a type of suspension feeding in which food particles are obtained by filtering them from a water current. For example, mangrove oysters filter-feed.

fledge—to take the first flight. Birds that have just fledged are often called fledglings.

flora—all the plants living in a particular place.

food chain—the passage of energy (food) from producers (plants) up to herbivores and carnivores.

food web—many interlocking and interdependent food chains.

fossil fuels—coal, oil, and other energy sources formed over millions of years from the remains of plants and animals. The burning of fossil fuel is a major source of pollution.

gastropod—a snail, limpet, nudibranch, or sea slug.

gizzard—the muscular part of a bird’s stomach that grinds hard-to-digest food.

global climate change—the predicted change in the Earth’s climate brought about by the accumulation of pollutants in the atmosphere. The effects of global climate change include altered weather patterns and rising sea levels.

greenhouse effect—the trapping of heat by gases, such as carbon dioxide, in the Earth’s atmosphere.

groundwater—water that fills the spaces between rocks and soil particles underground. Groundwater is replenished when rainwater trickles through the soil. Surface water, such as lakes and rivers, is often replenished by groundwater.

habitat—the specific physical place where an animal or organism lives—e.g., in a hole, under a rock, on a mangrove root.

herbivore—a plant-eating animal.

host—an organism in which or on which another lives; in certain symbiotic relationships the host is the larger of the two partners.

hypothesis - a tentative statement (or educated guess) about the relationship between two or more variables. A hypothesis is a specific, testable prediction about what you expect to happen in your experiment.

immature—not fully developed.

ingest—to take into the body, especially solid substances.

insectivore—an animal that eats insects or other invertebrates.

intertidal zone—a coastal area between the high-tide and low-tide zones that is alternately covered with water and exposed to the air.

introduced species—an animal or plant that has been brought into areas where the species never lived before. For example, the cane toad introduced to control the cane beetle. Introduced species often compete with and cause problems for native species.

invertebrate—an animal without a backbone.

larva (plural: larvae)—the juvenile stage of many animals. The larva is usually different in appearance from the adult and may lead a very different way of life.

leaching—the process by which materials on or in soil are dissolved and carried by water seeping through the soil. Leaching may contaminate groundwater supplies.

macroplankton—zooplankton over 1 mm in size.

mandible—in birds, the two halves of the beak. In other vertebrates, the lower jaw.

mangrove—a general term applied to several tropical and subtropical salt-tolerant trees.

mature—fully developed, adult.

megaplankton—very large plankton such as jellyfish and sunfish.

metabolism—energy changes that sustain life within an organism.

metamorphosis—a change in form that an animal undergoes as it develops from egg to adult.

molluscs—invertebrates including gastropods (such as conch and snails), bivalves (clams and mussels), and cephalopods (squid and octopus).

migration—seasonal movement from one region to another. For example, loggerhead turtles from feeding grounds to nesting areas.

moult—to shed and regrow an exoskeleton or other outer body coverings; for example, when a crab sheds its shells and replaces it with another.

mucus—a slimy secretion containing protein, which serves to moisten and lubricate membranes; is often used by filter- and suspension-feeders for trapping food particles.

native species—a species that occurs naturally in an area.

niche—the place where an organism lives and the activities it carries out; its address and “job”.

ornithology—the study of birds. An ornithologist is a scientist who studies birds.

overgrazing—the process that occurs when cattle, sheep, goats, or other animals graze too much in too small an area for too long a period. Overgrazing often results in soil erosion, the destruction of vegetation, and other problems.

pectoral muscles—the breast muscles. In most birds, the pectoral muscles are very powerful. They raise and lower the wings during flight.

photosynthesis—the manufacture of complex chemicals from carbon dioxide and water using light as the source of energy. This is usually a property of plants, the green pigment chlorophyll being essential in the process.

plankton—the collective name for small, drifting plants (phytoplankton) and animals (zooplankton). These aquatic organisms are the basis of mangrove and ocean food webs.

plumage—a bird's feathers referred to collectively.

pneumatophore—an air-containing organ.

poach—to hunt, kill, or collect a plant or animal illegally.

point pollution—pollution that comes from a particular source, such as from a factory or a sewage treatment plant. Nonpoint pollution, which doesn't come from a single identifiable source, includes materials that wash off streets, yards, farms, and other surfaces.

pollution—a human-caused change in the physical, chemical, or biological conditions of the environment that creates an undesirable and harmful effect on living things.

population—members of the same species living in a community.

predator—a carnivorous animal. Its victim is called the prey.

preen—when a bird cleans, straightens, and fluffs its feathers.

prey—an animal that is killed for food.

producer—an organism that can produce organic substances from inorganic ones; plants.

propagule—seed of the Red Mangrove tree.

prop roots—roots growing out from stems, often tree trunks, at an angle that tends to support the plants. Red Mangrove trees have many prop roots.

radula—the file-like tongue of many snail-like molluscs, used for rasping their food.

raptorial—adapted for seizing prey.

rare species—a species that has a small number of individuals and/or has a limited distribution. A rare species may not be threatened or endangered.

reef—an offshore ridge of materials such as rocks or coral that lies close to the surface of the water.

regeneration—in invertebrates, the regrowth of a missing part or the restoration of a new individual from part of the original.

rhizome—in plants, a horizontal stem on or under the ground that produces stems and roots

rookery— breeding ground of gregarious birds or mammals. Gregarious means they live or nest in groups.

roost—a place where birds rest at night, often in large numbers.

salinity—the saltiness of water, measured in parts per thousand.

salt marsh—an area of soft, wet land periodically flooded by salt water.

scavenger—an animal that feeds on dead or dying organisms.

school—many similar aquatic organisms swimming together.

sea squirt—a tunicate attached to another object such as a Red Mangrove root.

sediment—the material that settles through the water column to the bottom.

seed—in flowering plants, an embryo covered by a seed coat.

sessile—attached to the bottom of rocks, pilings, Red Mangrove roots, and so on.

shell—hard exoskeleton of certain animals, especially molluscs and marine arthropods.

song—the notes repeated by a bird over and over in a regular pattern. Birds use song to help defend territories and sometimes to attract mates.

species—a basic taxonomic group consisting of individuals of common ancestry who strongly resemble each other physiologically and who interbreed, producing fertile offspring.

spring tide—tide of maximum range occurring at the new and full moon.

stinging cell—in coelenterates (such as coral or jellyfish), cells that contain stinging structures.

sublittoral—pertaining to the zone below the low-tide line.

subtropical—nearly tropical in location and climate.

subspecies—a subdivision of a species consisting of individuals different from the rest of the species but that can still interbreed with other members of the species.

substrate—the bottom, which may be muddy, rocky or sandy; called the substratum by specialists.

subtidal—pertaining to the zone below the low-tide mark.

succession—the evolutionary sequence whereby plant and animal communities replace one another until they reach a stable “climax” community

suspension feeding—feeding upon particles, either plankton or detritus, suspended in the water.

symbiosis—an association in which two dissimilar organisms live closely together.

tactile—pertaining to the sense of touch.

temperate zone—that part of the Earth’s surface between the tropics and the poles.

territory—the space an animal or bird defends from other animals or birds (usually the same species) for mating or feeding.

thorax—in invertebrates, the region of the body between the head and abdomen.

threatened species—a species whose numbers are low or declining. A threatened species is not in immediate danger of extinction, but is likely to become endangered if it isn’t protected.

tidal range—the difference in height between consecutive high and low tides.

tidal wave—tsunami, or a huge sea wave caused by an oceanic disturbance.

tide—the periodic ebb and flow of ocean waters caused by the gravitational pull between the Earth and the moon and the Earth and the sun. In Australia there are two high tides and two low tides each day (24 hours).

tidepool—depression in a rock (or created by rocks) within the intertidal zone that traps water as the tide recedes.

tissue—cells of similar structure that are grouped together and perform a specific function.

toxic—poisonous.

tropics—the region between the Tropic of Cancer and the Tropic of Capricorn.

tunicates—sedentary filter-feeding animals whose larvae superficially resemble tadpoles, and which have many features that link them to the vertebrates.

unicellular—composed of one cell.

univalve—a mollusc with a one-piece shell; a gastropod.

valve—in invertebrates, a distinct piece of a shell.

vertebrates—animals with backbones, including fish, birds, amphibians, reptiles, and mammals.

warm-blooded—being able to maintain a constant body temperature independent of the outside temperature.

waste—material eliminated from the body.

zooplankton—animal plankton.