SOUTHERN ENCOUNTER

AQUARIUM & KIWI HOUSE

The Language of an Aquarium

12-05-04 version

1. INTRODUCTION

The lists following include many of the words and terms that may be used in specific ways in the context of the education programmes. This will differ with the education programme chosen but will retain a common core vocabulary.

These lists are a guide to the language likely to be encountered during the SEA School aquarium experience, not as mandatory prerequisite knowledge!

Although they are broken to Year levels these divisions are approximate only and if language from a higher level looks relevant to your chosen programme at the SEA School it is worthwhile addressing those as well.

The vocabulary list is cumulative in that older students will need to be familiar with preceding Year levels vocabulary lists as well as their own level. For example a Year 7-10 programme will include the vocabulary of Year 4-6 and Year 0-3.

The list for each level is divided to general and specific terminology. Words in the general list are likely to occur in all education programmes. Some specific lists will occur in particular programmes but may also arise in answering student queries even in unrelated programmes.

1. YEAR 0-3

General

Fish	any creature with gills and a backbone that swims in water
Fins	flattened paddle-like structures on a fish
Scales	small discs covering the skin of most common fish
Gills	special structures that exchange gases with the water for a water animal to breathe
Lungs	special structures that exchange gases with the air for a land animal to breathe
Cartilage	a flexible (bendy) material inside some fish eg sharks
Bone	the hard rigid (stiff) material inside other fish eg hapuka
Skeleton	lots of bones and/or cartilage that hold a body together and give it shape
Shell	a hard surface on the outside of an animal
Spines	spiky hard parts of an animal used for protection
Primitive	simple – and typically of ancient origin
Antennae	long “feelers” sticking out of the head of an animal

2. YEAR 4-6

General

Vertebrate	an animal with a backbone (internal skeleton)
Invertebrate	an animal without a backbone (external skeleton)
Bone	a hard calcified material making up skeleton in animals bodies
Cartilage	a softer, flexible material in animals bodies often occurring between bones, and making the skeleton of sharks.

With respect to conservation:

Endangered	at risk of extinction in the future
Extinct	no longer living anywhere
Extant	living (not extinct)
Exotic	not found naturally in an area
Introduced	brought artificially to an area by humans
Native	found naturally in an area (not introduced)
Endemic	found naturally only in a specific location

3. YEAR 7-10

General

Habitat	the area where an animal or plant occurs naturally
Adaptations	special features that allow a creature to survive
Lateral line	faint line along the side of the fish used in “hearing”
Juvenile	a young immature individual
Quarantine	isolation (to prevent passing of disease or parasites)

With respect to feeding:

Detrital	feeds on detritus
Planktonic	feeds on plankton, or lives amongst plankton
Parasitic	feeds on a living animal to the animals harm or death
Herbivorous	feeds on plants
Carnivorous	feeds on animals (living or dead)
Predatory	feeds on living animals
Omnivouous	feeds on both plant and animal

With respect to fins:

Dorsal	on top of the body
Anal	below the body
Caudal	the tail
Pectoral	paired, on either side of the body close behind the gills
Pelvic	paired, below body closer to gills than tail
Adipose	small fatty (unrayed) fin between dorsal and caudal fins

With respect to body:

Dorsal	upper or topmost surface
Ventral	lower or bottommost surface
Anterior	front
Posterior	rear
Lateral	from side to side
Longitudunal	from front to rear
Aboral	the dorsal, unsuckered side of an octopus tentacle
Hectocotylus	modified tentacle end of male octopus used in sperm transfer

With respect to habitat:

Estuarine	lives in estuaruies
Marine	lives in the sea
Euryhaline	able to tolerate a wide range of salinities

With respect to coral reefs:

Cnida	a capsule inside the cnidocyte containing the nematocyst
Cnidaria	hydras; polyps; jellyfishes; sea anemones; corals
Cnidocytes	prey-capture and defensive stinging cells found ONLY on animals of the phylum Cnidaria
Corallite	part of the skeleton deposited by one polyp
Corallum	skeleton of the coral
Nematocyst	a long, hollow, coiled thread. The nematocyst is the actual "dart" of the stinging cell. The business end of the nematocyst

	can be armed with hooks, spines, or barbs, and some can inject toxins into the prey animal.
Predation	the act of preying by a predator who kills and eats the prey
Zooxanthellae	unicellular yellow-brown algae living symbiotically in gastrodermis of reef-building corals

YEAR 11-13

General

Swim Bladder	a gas or fat filled tube within the fish that provides buoyancy
Teleosts	bony fish with a swim bladder
Elasmobranch	cartilaginous fish – sharks, rays, skate etc
Agnathean	a jawless fish
Crustacean	a hard-shelled mobile invertebrate with several pairs of legs
Echinoderm	invertebrates with 5 part radial symmetry
Carapace	the thoracic shell of a crustacean
Thorax	the middle section of invertebrate body (between head and thorax)
Abdomen	third section of invertebrate body (after head and thorax)

With respect to behaviour:

Circadian	daily patterns or rhythms of behaviour
Diurnal	active during daylight
Nocturnal	active at night
Crepuscular	active at dusk and dawn
Catheneral	active at all hours
Benthic	bottom dwelling
Pelagic	floating or free-swimming
Demersal	denser than water and therefore sinking
Denticles	small tooth-like structures on the skin of elasmobranch fish
Sexual dimorphism	size difference between the sexes – females are larger
Sexual dichromatism	colour difference between the sexes
Territoriality	protecting a given area against others

With respect to support:

Exoskeleton	skeleton, or support structure, which supports the organisms body from the outside
Endoskeleton	a skeletal structure internal to an organism
Hydrostatic skeleton	a skeleton where rigidity is provided by water pressure within an organisms body

With respect to locomotion:

Pereiopod	crustacean walking leg (thorax)
Cheliped	crustacean claw-like first leg (thorax)
Pleopod	crustacean swimming leg (abdomen)
Uropod	crustacean flipper-like tail paddle

With respect to tail shape:

Heterocercal	upper lobe is longer than lower
Homocercal	upper and lower lobes are the same length
Hypocercal	lower lobe is longer than upper

With respect to reproduction:

Claspers	protruding male sexual organs in elasmobranch fish
Cloaca	female sexual organs in elasmobranch fish
Internal fertilisation	requires intercourse for the mixture of sperm and egg
External fertilisation	the release of sperm and eggs to the water to mix

Oviparity	young are yolk nourished within a laid egg
Ovoviparity	young are yolk nourished and born live
Viviparity	young are maternally nourished and born live
Hermaphrodite	an individual with sex organs of both sexes
Anadromous	migrate from salt to freshwater to breed
Catadromous	migrate from fresh to salt water to breed
Diadromous	live in both salt and fresh water often related to spawning
Amphidromous	live in both salt and fresh water unrelated to spawning

With respect to classification:

Kingdom	5 divisions of all life (Plantae, Animalia, Monera, Protista, Fungi)
Phylum	Porifera, Cnidaria, Arthropoda, Arthropoda, Mollusca, Echinodermata, Chordata are represented in the aquarium
Class	divisions of Phylum (too numerous to list)
Order	divisions of Class (too numerous to list)
Family	divisions of Order (too numerous to list)
Genus	names groups of very similar living things (similar to a surname)
Species	names individual species within a genus (similar to a first name)

With respect to mouth position:

Supraterminal	mouth points upwards
Terminal	mouth points forwards
Subterminal	mouth points downwards

With respect to corals:

Calice	upper opening of the corallite
Cnida	a capsule inside the cnidocyte containing the nematocyst
Cnidaria	hydras; polyps; jellyfishes; sea anemones; corals
Cnidocytes	prey-capture and defensive stinging cells found ONLY on animals of the phylum Cnidaria
Coenosarc	coral tissue that stretches over the surface of the coral **between** the polyps
Coenosteum	skeletal material around the corallites
Columella	central axis of the corallite found below the mouth
Commensalism	symbiotic relationship between two organisms of different species in which ONE derives some benefit while the other is unaffected
Corallite	part of the skeleton deposited by one polyp
Corallum	skeleton of the coral
Epidermis	outer layer of a plant or animal
Gastrodermis	inner layer lining the digestive (gastrovascular) cavity
Gastrovascular	having a digestive and a circulatory function, especially in describing the body cavity
Hermatypic	reef building
Mesoglea	layer of gelatinous material that separates the inner and outer cell layers
Mutualism	the relation between two different species of organisms that are interdependent where BOTH gain benefits from the other
Nematocyst	a long, hollow, coiled thread. The nematocyst is the actual "dart" of the stinging cell. The business end of the nematocyst

	can be armed with hooks, spines, or barbs, and some can inject toxins into the prey animal.
Parasitism	the relation between two different kinds of organisms in which one receives benefits from the other by causing damage to it (usually not fatal damage)
Pharynx	cavity at the back of the mouth
Predation	the act of preying by a predator who kills and eats the prey
Septa	(insert and exsert) calcareous plate-like structure which radiate from the wall to the center of the corallite
Theca	skeletal wall around each polyp
Zooxanthellae	unicellular yellow-brown algae living symbiotically in gastrodermis of reef-building corals