

Sharks4Kids Middle School Unit 1 Vocabulary

- 1) Cartilage – a strong, flexible connective tissue that forms the skeleton of sharks.
- 2) Dermal Denticles – tiny tooth shaped scales that cover a shark's body (also called placoid scales). They reduce resistance as the shark moves through the water (hydrodynamic), allowing it to swim faster while using less energy.
- 3) Pigment – a substance that produces a characteristic color in plant or animal tissue.
- 4) Vestigial – relating to a body part that has become small and lost its use because of evolutionary change.
- 5) Spiracle – spiracles are found in some sharks and all rays. They are a pair of openings just behind the fish's eyes that allow it to draw oxygenated water in from above. The spiracles aid the fish in breathing even when it is lying on the ocean bottom or buried in the sand.
- 6) Swim Bladder – an internal gas-filled organ that contributes to the ability of a fish to control its buoyancy.
- 7) Ectotherm – cold blooded, any animal whose regulation of body temperature depends on external sources (sun, water temperature, etc).
- 8) Endotherm – warm blooded, any animal that maintains its body at a metabolically favourable temperature.
- 9) Tapetum Lucidum – is a reflective layer of cells that lie behind the retina and improve vision in low light conditions.
- 10) Nictitating Membrane – a thin membrane similar to our eyelids that sharks have and can use to protect their eyes when attacking prey.
- 11) Otolith – organs in the ear that sense gravity and acceleration, they keep an organism stabilized.
- 12) Ampullae of Lorenzini. – tiny pores filled with a jelly like substance that can detect electrical fields traveling through the water. There are more of them on the head of the shark (around the snout) than anywhere else.
- 13) Geomagnetic Field – also called the Earth's magnetic field, it extends from the Earth's interior to where it meets the solar wind, a stream of charged particles emanating from the Sun.
- 14) Lateral Line – a row of sensory cells along the side of a shark that allow it to detect vibrations in the water.

15) **Hormones** – a chemical substance produced in the body that controls and regulates the activity of certain cells or organs.

16) **Claspers** – organs that found on male sharks (and rays). Each male has two claspers. They are located along the inner side of the shark's pelvic fin and are used in reproduction to deposit sperm.

17) **Oviparity** – (aplacental viviparity) reproduction through laying eggs.

18) **Viviparity** – reproduction through live birth.

19) **Fecundity** – is the actual reproductive rate of an organism or population.

20) **Oophagy** – is the practice of embryos feeding on eggs produced by the ovary while still inside the mother's uterus.

21) **Intrauterine Cannibalism** – when the largest and strongest embryo actually consumes its lesser womb-mates.

22) **Ecosystem** – animals, plants and nonliving things that make up an environment and impact one another.

23) **Biodiversity** – the variety of different species within an ecosystem. Coral reefs are one of the most diverse ecosystems on the planet.

24) **Abiotic** – all the non-living things that affect living organisms in the ecosystem

25) **Biotic** – all the living things that affect living things in an ecosystem. (Example: plants & animals)

26) **Autotroph** – or producers, are organisms that have the ability to make (produce) their own energy from sunlight and simple chemicals.

27) **Photosynthesis** – the process by which plants make their own food. They use carbon dioxide, water and sunlight (energy) to produce sugar (food) and oxygen.

28) **Chemosynthesis** – primary production occurring through the conversion of chemicals to energy.

29) **Heterotroph** – or consumers must obtain nutrients by eating other organisms.

- 30) Primary Consumer – animals that eat plants.
- 31) Secondary Consumer – animals that eat plant eating animals.
- 32) Tertiary Consumer – animals that eat secondary consumers.
- 33) Scavengers – an organism that feeds off the carcasses of other organisms.
- 34) Detritivores – an organism that uses organic waste as a food source.
- 35) Decomposers – break down dead plants and animals. They also break down the waste of other organisms.
- 36) Opportunistic – exploiting chances offered by immediate circumstances.
- 37) Carrying Capacity – the population that can be supported indefinitely by the available resources and services of an ecosystem.
- 38) Bioaccumulate – the build up of toxic substances (occurring in the environment) within living organisms. (Example: pesticides or mercury)
- 39) Neurotoxins – any substance that is capable of causing damage to nerves or nerve tissue.
- 40) Bycatch – certain fish or other animals (dolphin, sea turtles) that are caught unintentionally while fishing for a specific fish species.
- 41) Squalene – a naturally occurring substance found in plants, animals, and humans. Found in large quantities in shark liver oil.
- 42) Keystone Species – a keystone species is a plant or animal that plays a unique and crucial role in the way an ecosystem functions. Without keystone species, the ecosystem would be dramatically different or cease to exist altogether.
- 43) Population – all of the individuals of the same species living within a given area.
- 44) Gene Pool – all of the genes available for breeding in a particular group of species.