

# EDUCATION PROGRAMS

## EARLY LEARNING

Year Level	Education Program	Program outline	Curriculum links
Early Years Learning Kindergarten	 UNDER THE SEA	Your group will be guided by our Aquanaut into our interactive classroom where they will be given a 10-minute introduction to life under the Sea. Children will be taken on a guided tour from Rainforest, River to Reef to learn about the animals and what they eat, where they live and how they survive. Your tour will end with time at our Marine touch tanks connecting with all our animals found "under the sea".	Connectedness: Children are connected with and contribute to their world.  Active Learning: Children are confident and involved learners.

## PRIMARY

Year Level	Education Program	Program outline	Curriculum links
Foundation / Prep	 OUR LIVING WORLD	Students will explore Australia's habitats and find unique wildlife that live amongst them. They will learn firsthand what basic things animals need for their survival. Your tour will help students connect with the natural world by learning all about where the animals live, what they eat and how they survive in their habitat	<ul style="list-style-type: none"> <li>Living things have basic needs, including food and water (ACSSU002)</li> </ul> EXTRA LINKS: - ACSSU004, ACSHE013, ACHGK004
Year 1	 LIVING ADVENTURE	Students will learn what happens to animals when something in their habitat changes. Along their journey, they will see firsthand the external features our weird and wonderful animals have, what they use them for and how these features enable the animal to survive in their environment.	<ul style="list-style-type: none"> <li>Living things have a variety of external features (ACSSU017)</li> <li>Living things live in different places where their needs are met (ACSSU211)</li> </ul> Extra Links: - ACSHE022, ACHGK005
Year 2	 GROWING UP	Students will explore how animals grow within different ecosystems including Rainforest, Rivers and Reef habitats. Students will be given the opportunity to investigate animals found on the Forest Floor, Mangrove Nursery and Great Barrier Reef Zones to see different characteristics of life stages.	<ul style="list-style-type: none"> <li>Living things grow, change and have offspring similar to themselves (ACSSU030)</li> </ul> Extra Links: - ACSHE034, ACSHE035, ACHGK011
Year 3	 IS IT LIVING	Students will venture through key habitats to observe the animals and determine if they are living or non-living. Students will be able to group animals by observing their features and determine if they are living, once living or products of living things. Are corals alive? Do shells grow? If it does not move in the Rainforest is it nonliving?	<ul style="list-style-type: none"> <li>Living things can be grouped on the basis of observable features and can be distinguished from non-living things (ACSSU044)</li> </ul> Extra Links: - ACSHE050, ACSHE051, ACHGK018, ACHGK014
Year 4	 CIRCLE OF LIFE	Students will connect and understand how important Rainforests are to the health of the Great Barrier Reef, and how the survival of the Mangrove Forests is imperative to all surrounding ecosystems and the animals that live amongst them. Students will be able to describe life cycles of different living things found within our 9 habitats and recognize that some plant species cannot complete their life cycle without the help of an animal. Your tour will include a talk on predator-prey where your students will come face to face with a hammer head shark, sting rays and the fish they prey upon.	<ul style="list-style-type: none"> <li>Living things have life cycles (ACSSU072)</li> <li>Living things, including plants and animals, depend on each other and the environment to survive (ACSSU073)</li> </ul> EXTRA LINKS: - ACSHE062, ACHGK022, ACHGK021, ACHGK024, ACHGK020
Year 5	 ADAPTATION	Students will explore some of Australia's important and unique ecosystems and learn what structural features animals need to adapt and survive in the Rainforest, Rivers and Reef. Students will be given a private talk in the Great Barrier Reef zone and see why fish are so colourful and how animals protect themselves from apex predators. Students will be given the opportunity to find out why a lot of terrestrial animals are nocturnal and how certain species adapt and survive through lack of water and food.	<ul style="list-style-type: none"> <li>Living things have structural features and adaptations that help them to survive in their environment (ACSSU043)</li> </ul> Extra Links: - ACHGK030
Year 6	 LIFE ON EARTH	Students will observe animals from different types of habitats and ecosystems and see how the growth and survival of living things are affected by the physical conditions of the environment in which they live, including man made impacts. Students will come face to face with the Crown of Thorns Sea Star, which is responsible for natural impacts on the Great Barrier Reef. Students will learn how important our Floodplains and Freshwater River systems are to the life cycle of several fish, including the Sawfish, Barramundi and Freshwater Whiptail Ray.	<ul style="list-style-type: none"> <li>The growth and survival of living things are affected by the physical conditions of their environment (ACSSU094)</li> </ul> Extra Links: - ACHGK033



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## SECONDARY

Year Level	Education Program	Program outline	Curriculum links
Year 7	 CREATURES	Students will use a dichotomous key to classify and group animals. Students will be able to describe and construct the food chains and webs found within each ecosystem and predict what may happen with human activity, like over fishing and deforestation, or if one species of animal was to disappear or turn up in a habitat, like the Crown of Thorns Sea Star on the Great Barrier Reef and the Cane Toad in the Wet Tropics Rainforest.	<ul style="list-style-type: none"> <li>• There are differences within and between groups of organisms; classification helps organize this diversity (ACSSU111)</li> <li>• Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions (ACSSU112)</li> </ul> Extra Links: - ACSSU222, ACSHE223, ACSHE120, ACHGKO37, ACHGKO38
Year 8	 SURVIVAL	Students will investigate how animals survive within their specific habitat and ecosystem. What digestive system do they have? How do they get oxygen from water? How do they reproduce (asexual or sexual)? What specific features and adaptations do they have for survival? Students will also look at Coral Bleaching at a cellular level and understand the symbiotic relationship zooxanthellae have with coral. Students will also meet our most venomous fish in the world and understand how it plays a large role in the survival of critically ill heart patients.	<ul style="list-style-type: none"> <li>• Cells are the basic units of living things and have specialized structures and functions (ACSSU149)</li> <li>• Multi-cellular organisms contain systems of organs that carry out specialized functions that enable them to survive and reproduce (ACSSU150)</li> <li>• Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world (ACSHE134) Extra Links: - ACSHE135, ACSHE27, ACHGKO51, ACHGKO52</li> </ul>
Year 9	 OUR COMPLEX ECO-SYSTEMS	Students will be taken on a tour through the Rainforest to Reef ecosystems where they will expand their knowledge on how these habitats are connected. Students will learn the requirements for life of Sharks, Rays, Sawfish and Barramundi and how their body systems function throughout freshwater to saltwater, shallow to deep and during breeding season. Throughout the Rainforest Zone, students will understand the role of animals within their habitat and where they sit on the food web (predator/prey, competitor, pollinator, parasite).	<ul style="list-style-type: none"> <li>• Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment (ACSSU175)</li> <li>• Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems (ACSSU176)</li> </ul> Extra Links: - ACHGKO60, ACHGKO61
Year 10	 OUR LIVING WORLD - THE THEORY OF NATURAL SELECTION	Students will investigate why biodiversity is important as a function of evolution and what long term effects may occur if biodiversity was lost. Students will also investigate how climate change can have an impact on our Reef and Rainforest ecosystems and how this may affect natural selection. Students will have a better understanding on what strategies and behaviours can be adopted to help reduce our impact on the environment and what they can do for sustainability.	<ul style="list-style-type: none"> <li>• The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence (ACSSU185)</li> <li>• Global systems, including the carbon cycle, rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere (ACSSU189)</li> </ul> Extra Links: - ACSSU184, ACHGKO70, ACHGKO71

## SENIOR

Year 11&12	<p>Please contact us to discuss your requirements for a tailor-made program to suit your unit and curriculum needs. The following topics can be covered however is not limited to:</p> <ul style="list-style-type: none"> <li>• Biological Science</li> <li>• Aquaculture / Marine Science</li> <li>• Physics</li> <li>• Chemistry</li> <li>• Hospitality</li> <li>• Business</li> <li>• Tourism</li> </ul>
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## TERTIARY

University & TAFE	Please contact the Cairns Aquarium to discuss your requirements for a custom made program to suit your individual needs
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