





































Boyne Island Environmental Education Centre Curriculum Plan





Key	<p>General Capabilities:-  Literacy  Numeracy  ICT capability  Critical and creative thinking  Personal and social capability  Ethical Understanding  Intercultural understanding</p> <p>Cross-curriculum priorities:-  Aboriginal and Torres Strait Islander histories and cultures  Asia and Australia's engagement with Asia  Sustainability</p>		
Year level	Program	Overview	Curriculum Links          
<p style="text-align: center;">Residential camp programs</p> <p>All residential camp programs directly link to the Australian Curriculum: General Capabilities – Personal and Social Capability Continuum. They promote recognition of emotions, confidence and resilience, self-worth, independence, collaboration and reflective practice and are differentiated based on the year level targeted on the continuum. Research indicates that living and working with peers promotes a positive mind frame conducive to learning and benefits students by building resilience, building independence and building supportive and trusting relationships.</p> <p>Residential camps at BIEEC are programs packaged to achieve specific learning outcomes through the Centre’s mission “To add value to school based curriculum by delivering authentic, stimulating, real world learning experiences beyond the capacity of the classroom”. The programs have clear student outcomes, curriculum links and the learning experiences are explicitly aligned to allow student success. Students are provided with a pre and post survey to track their learning and set goals based on their chosen areas for improvement. Please note that the programs have an element of flexibility and visiting schools can liaise closely with BIEEC program coordinators to ensure successful outcomes for all students who visit.</p>			
4	Dive in!	<p>Students DIVE IN to their first camp experience with Sargent Swordfish arriving and setting the students to various tasks and justifying their time on camp as a learning experience, not just fun! Through completion of team building activities including problem solving, low ropes and trust activities students are given clues during the week to locate and find their reward.</p> <p>Furthermore, the program offers a Science - Biology focus from the Australian Curriculum with a unique and exclusive interaction with the Caring for Clownfish facility and in addition have the opportunity to explore the Great Barrier Reef through a virtual reality experience. Targeting Life Cycles, students will learn about the Clownfish breeding program, observe other reef fish and marine life, feed the fish , discover the secret world of plankton and use scientific tools to measure and test the water quality. Students also use microscopes to observe microscopic organisms. After learning about our sustainable clownfish breeding program, students make their own pledge to save the reef.</p> <p>The program targets key elements from the General Capabilities – Personal and Social Capability - strand of the Australian Curriculum such as recognising emotions, becoming</p>	<p>GENERAL CAPABILITIES: PERSONAL AND SOCIAL CAPABILITY – Level 3</p> <ul style="list-style-type: none"> • Self and Social Awareness • Self and Social Management <p>GENERAL CAPABILITIES:   </p> <p>CROSS CURRICULUM PRIORITIES:  </p> <p>SCIENCE</p> <ul style="list-style-type: none"> • Living things have life cycles (ACSSU072) • Living things depend on each other and the environment to survive (ACSSU073) • Science involves making predictions and describing patterns and relationships (ACSHE061) • Science knowledge helps people to understand the effect of their actions (ACSHE062) • With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (AC SIS064) • Consider the elements of fair tests and use formal measurements and digital technologies as appropriate, to make and record observations accurately (AC SIS066)













		<p>confident and resilient, appreciate diverse perspectives, working collaboratively and develop reflective practices.</p> <p>Duration: 2-3 days (1-2 nights)</p>	<p>HPE:</p> <ul style="list-style-type: none"> • Explore how success, challenge and failure strengthen identities (ACPPS033) • Explore strategies to manage physical, social and emotional change (ACPPS034) • Identify and practise strategies to promote health, safety and wellbeing (ACPPS036) • Describe how respect, empathy and valuing diversity can positively influence relationships (ACPPS037) • Participate in outdoor games and activities to examine how participation promotes a connection between the community, natural and built environments, and health and wellbeing (ACPPS041 - • Apply innovative and creative thinking in solving movement challenges (ACPMP049)
5	<u>Mission Possible</u>	<p>Upon arrival, students are called to action with an exciting mission to escape from a deserted island. They are challenged to use their critical thinking skills and leadership skills to make the <i>Mission Possible</i>. Students will be challenged with team building missions, will conquer the low ropes and high ropes, catch and identify microscopic creatures, contest the rivals at the beach and take a slow blindfolded walk through the senses trail. Students use deep reflective skills to acquire beads for their tribe's Survivor necklace and meet at a daily Tribal Council to summarise their efforts and achievements for the day.</p> <p>The missions all target communication, problem solving, initiative, trust and teamwork while incorporating key elements from the General Capabilities – Personal and Social Capability - strand of the Australian Curriculum. Elements such as recognising emotions, becoming confident and resilient, appreciate diverse perspectives, working collaboratively and develop reflective practices are specifically targeted and debriefed upon throughout each mission.</p> <p>Duration: 3-5 day (2-4 night)</p>	<p><i>GENERAL CAPABILITIES: PERSONAL AND SOCIAL CAPABILITY – Level 4</i></p> <ul style="list-style-type: none"> • Self and Social Awareness • Self and Social Management <p><i>GENERAL CAPABILITIES:</i>   </p> <p><i>CROSS CURRICULUM PRIORITIES:</i>  </p> <p>HASS</p> <ul style="list-style-type: none"> • Reflect on learning to propose personal and/or collective action in response to an issue or challenge, and predict the probable effects (ACHASSI104) • Work in groups to generate responses to issues and challenges (ACHASSI102) <p>HPE :</p> <ul style="list-style-type: none"> • Practise skills to establish and manage relationships (ACPPS055) • Examine the influence of emotional responses on behaviour and relationships (ACPPS056) • Explore how participation in outdoor activities supports personal and community health and wellbeing and creates connections to natural and built environments (ACPPS059) • Identify how valuing diversity positively influences the wellbeing of the community (ACPPS060) • Participate positively in groups and teams by encouraging others and negotiating roles and responsibilities (ACPMP067) • Apply critical and creative thinking processes in order to generate and assess solutions to movement challenges (ACPMP068)
6	<u>Boyne Island Challenge</u>	<p>Get ready as students participate in an action-packed journey of survivor type challenges to ultimately complete the <i>Boyne Island Challenge</i>.</p> <p>Base command contacts student via a UHF walkie talkie and delivers team building challenges such as designing and constructing both a shelter and a raft, building a fire and using traditional methods to start the fire, navigating the river while canoeing and pushing past comfort zones on the high ropes challenge. Using elements from the Australian Curriculum – General Capabilities -Personal and Social Capability continuum - the program targets opportunities for students to recognise emotions, become confident and resilient, appreciate diverse perspectives, work collaboratively and develop reflective practices.</p> <p>Students collectively reflect at the conclusion of each challenge to acquire their epaulette 'stripes' which signifies their ability to reflect honestly on their experience</p>	<p><i>GENERAL CAPABILITIES: PERSONAL AND SOCIAL CAPABILITY – Level 4</i></p> <ul style="list-style-type: none"> • Self and Social Awareness • Self and Social Management <p><i>GENERAL CAPABILITIES:</i>   </p> <p><i>CROSS CURRICULUM PRIORITIES:</i>  </p> <p>HPE :</p> <ul style="list-style-type: none"> • Practise skills to establish and manage relationships (ACPPS055) • Examine the influence of emotional responses on behaviour and relationships (ACPPS056) • Explore how participation in outdoor activities supports personal and community health and wellbeing and creates connections to natural and built environments (ACPPS059)











		<p>and consider their learning. Upon completing each challenge, students collect a badge which assists them to conquer the <i>Boyne Island Challenge</i> and receive their reward.</p> <p>Duration: 4-5 days (3-4 nights)</p>	<ul style="list-style-type: none"> Identify how valuing diversity positively influences the wellbeing of the community (ACPPS060) Participate positively in groups and teams by encouraging others and negotiating roles and responsibilities (ACPMPO67) Apply critical and creative thinking processes in order to generate and assess solutions to movement challenges (ACPMPO68)
7-10	Camp Champion	<p>With the belief that every person has the ability to be a champion within themselves, students are called to action and set on a journey to be the best version of themselves. Student embark on a journey of self-reflection and self-esteem by driving their own metaphoric ‘train’ and collecting ‘carriages’ (personal life skills) along the way.</p> <p>STEAMing along through various challenges, students will be stopping at all stations endeavouring to arrive at a destination of improved understanding of self. Through the Camp Champion program principles of co-operation, communication, persistence, respect and reflective thinking, students will challenge themselves with a confronting physical challenge (hike or canoe expedition) conquer fears on the high ropes, work collaboratively in team building activities and design and build a water tight raft.</p> <p>Using elements from the Australian Curriculum – General Capabilities -Personal and Social Capability continuum - the program targets opportunities for students to recognise emotions, become confident and resilient, appreciate diverse perspectives, work collaboratively and develop reflective practices. Throughout the journey, students are designated a team to support and encourage them throughout their journey. Individual success is measured by their own ability to critically self-reflect upon their journey to acquire their reward.</p> <p>Duration: 4-5 days (3-4 nights)</p>	<p><u>GENERAL CAPABILITIES: PERSONAL AND SOCIAL CAPABILITY – Year 7/8 Level 5 and Year 9/10 Level 6</u></p> <ul style="list-style-type: none"> Self and Social Awareness Self and Social Management <p><u>GENERAL CAPABILITIES:</u>   </p> <p><u>CROSS CURRICULUM PRIORITIES:</u>  </p> <p><u>HPE – Year 7/8</u></p> <ul style="list-style-type: none"> Evaluate strategies to manage personal, physical and social changes that occur as they grow older (ACPPS071) Practise and apply strategies to seek help for themselves or others (ACPPS072) Investigate and select strategies to promote health, safety and wellbeing (ACPPS073) Investigate the benefits of relationships and examine their impact on their own and others’ health and wellbeing (ACPPS074) Analyse factors that influence emotions , and develop strategies to demonstrate empathy and sensitivity (ACPPS075) Plan and implement strategies for connecting to natural and built environments to promote the health and wellbeing of their communities (ACPPS078) Investigate the benefits to individuals and communities of valuing diversity and promoting inclusivity (ACPPS079) Practise and apply personal and social skills when undertaking a range of roles in physical activities (ACPMPO86) <p><u>HPE – Year 9/10</u></p> <ul style="list-style-type: none"> Evaluate factors that shape identities and critically analyse how individuals impact the identities of others (ACPPS089)
11-12	Reef Adventure (North West Island)	<p>This program provides a rare opportunity for students to live on a Coral Cay in the heart of the Southern Great Barrier Reef. North West Island is situated 85kms off the coast of Gladstone and is the largest island of the Capricorn Bunker group. During this 5 – 8 day experience, students camp, cook and live in a communal style arrangement and have the reef at their doorstep. Studies may include reef flat or rocky pools, low and high water snorkelling, island walks and history, intro to SCUBA and students can collect data aimed at senior biology, geography or marine science syllabuses. BIEEC staff provide all the qualifications, expertise and specialised equipment to conduct this experience.</p> <p>CONSULTATION WITH BIEEC ESSENTIAL TO PROCEED WITH PROGRAM AND MINIMUM NUMBERS APPLY.</p>	<p><u>Senior Syllabus -Marine Science</u></p> <p>Unit 1 –Oceanography Unit 2 – Marine Biology Unit 3 – Marine systems – connections and change</p> <p><u>Senior Syllabus - Aquatic Practices</u></p> <p><i>Environmental</i></p> <p>E1 – Environmental conditions E2 – Ecosystems E3 – Conservation and sustainability E4 – Citizen Science (Elective)</p> <p><i>Recreational</i></p> <p>R1- Entering the aquatic environment R2 - Aquatic activities - snorkelling</p> <p><u>Senior Syllabus - Biology</u></p> <p>Unit 3 Biodiversity and the interconnectedness of life - students will collect data using sampling methodology to support completion of the mandatory practical from Unit 3.</p> <ol style="list-style-type: none"> Determine species diversity of a group of organisms based on a given index Use the process of stratified sampling to collect and analyse primary biotic and abiotic field data to classify an ecosystem





			<p>3. Select and appraise an ecological surveying technique to analyse species diversity between two spatially variant ecosystems of the same classification Unit 3 – IA2 – Student Experiment</p>
<p>9-12</p>	<p>Island Inquiry</p>	<p>During this 3 day wilderness experience students will camp and live in a communal style living arrangement at the northern end of Facing Island at the Oaks camp grounds on the outskirts of the Gladstone Harbour. Facing island provides the perfect opportunity for students to study the coastal environment including dune systems, rocky shore, rocky reef flats, salt marsh and all the organisms that are part of these ecosystems, all whilst learning survival skills including orienteering, fresh water collection, cooking and camping. A biology, geography or marine science lens can be cast over all studies and BIEEC staff provide all qualifications, expertise and specialised equipment to conduct this experience. Some student camping equipment required.</p> <p>CONSULTATION WITH BIEEC ESSENTIAL TO PROCEED WITH PROGRAM AND MINIMUM NUMBERS APPLY.</p>	<p>Senior Syllabus -Marine Science Unit 1 –Oceanography Unit 2 – Marine Biology Unit 3 – Marine systems – connections and change</p> <p>Senior Syllabus - Aquatic Practices <i>Environmental</i> E1 – Environmental conditions E2 – Ecosystems E3 – Conservation and sustainability E4 – Citizen Science (Elective) <i>Recreational</i> R1- Entering the aquatic environment R2 - Aquatic activities - snorkelling</p> <p>Senior Syllabus - Biology Unit 3 Biodiversity and the interconnectedness of life - students will collect data using sampling methodology to support completion of the mandatory practical from Unit 3. 1. Determine species diversity of a group of organisms based on a given index 2. Use the process of stratified sampling to collect and analyse primary biotic and abiotic field data to classify an ecosystem 3. Select and appraise an ecological surveying technique to analyse species diversity between two spatially variant ecosystems of the same classification Unit 3 – IA2 – Student Experiment</p> <p>Yr 9 Science</p> <ul style="list-style-type: none"> Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems (ACSSU176) Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (AC SIS165) Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (AC SIS166) Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations (AC SIS174) <p>Year 10 Science</p> <ul style="list-style-type: none"> Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (AC SIS199) Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (AC SIS200) Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations (AC SIS208) <p>Yr9 – Geography</p> <ul style="list-style-type: none"> Distribution and characteristics of biomes as regions with distinctive climates, soils, vegetation and productivity (ACHGK060) Develop geographically significant questions and plan an inquiry that identifies and applies appropriate geographical methodologies and concepts (ACHGS063) Evaluate sources for their reliability, bias and usefulness and select, collect, record and organise relevant geographical data and information, using ethical protocols, from a range of appropriate primary and secondary sources (ACHGS064)



			<p>Yr 10 – Geography</p> <ul style="list-style-type: none"> Human-induced environmental changes that challenge sustainability (ACHGK070) The application of systems thinking to understanding the causes and likely consequences of the environmental change being investigated (ACHGK073) The application of geographical concepts and methods to the management of the environmental change being investigated (ACHGK074) The application of environmental economic and social criteria in evaluating management responses to the change (ACHGK075) Evaluate sources for their reliability, bias and usefulness and select, collect, record and organise relevant geographical data and information, using ethical protocols, from a range of appropriate primary and secondary sources (ACHGS073) Represent multi-variable data in a range of appropriate forms, for example scatter plots, tables, field sketches and annotated diagrams, with and without the use of digital and spatial technologies (ACHGS074)
11-12	<u>Senior Biology Experience</u>	During this 2-5 day residential camp experience students gather raw primary data from local environments to add value to their syllabus requirements and complete mandatory practicals. Biotic and abiotic data is gathered, scientific methods of data gathering is explored and various technology is provided to assist with data collection. BIEEC staff provide local area knowledge of various species of organisms. Follow up work around data analysis occurs during evening sessions. Various environments are investigated and a program is agreed upon with liaison between the visiting teacher and BIEEC staff.	<p><u>Senior Syllabus - Biology</u></p> <p>Unit 3 Biodiversity and the interconnectedness of life - students will collect data using sampling methodology to support completion of the mandatory practical from Unit 3.</p> <ol style="list-style-type: none"> Determine species diversity of a group of organisms based on a given index Use the process of stratified sampling to collect and analyse primary biotic and abiotic field data to classify an ecosystem Select and appraise an ecological surveying technique to analyse species diversity between two spatially variant ecosystems of the same classification <p>Unit 3 – IA2 – Student Experiment</p>
11-12	<u>Senior Marine Science Experience</u>	During this 2-5 day residential camp experience students gather raw primary data from local environments to add value to their syllabus requirements. Biotic and abiotic data is gathered, scientific methods of data gathering is explored and various technology is provided to assist with data collection. BIEEC staff provide local area knowledge of various species of organisms. Follow up work around data analysis occurs during evening sessions. Various environments are investigated and a program is agreed upon with liaison between the visiting teacher and BIEEC staff.	<p><u>Senior Syllabus - Marine Science</u></p> <p>Unit 2 Marine Biology</p> <p>Topic 1: Marine ecology and biodiversity</p> <p>Topic 2: Marine Environmental Management Mandatory Practical</p> <ol style="list-style-type: none"> Conduct an investigation to determine factors of population dynamics (e.g. density or distribution) and assess abiotic components of a local ecosystem case study. Emphasis should be placed on assessing the processes and limitations of the chosen technique (e.g. quadrat, transect). When students identify and describe marine species, they should use field guides and identification keys.

Year level	Program	Overview	Curriculum Links
<p><i>Day visit programs (onsite at BIEEC and offsite at various environments)</i></p> <p>All day visits are explicitly linked to the Australian Curriculum and are designed to achieve specific learning outcomes through the Centre’s mission “To add value to school based curriculum by delivering authentic, stimulating, real world learning experiences beyond the capacity of the classroom”. The programs have clear student outcomes, curriculum links and the learning experiences are explicitly aligned to allow student success. Students are provided with a student reflection tool to track their learning and set goals based on their chosen areas for improvement.</p>			
1	Habitat Hunters	<p>Students arrive ready for learning as Habitat Hunters! Students explore the living world around them uncovering a range of animals and insects in their environments. They observe their external features and the habitats that allow them to thrive. Exciting interactions with animals and their habitats through student centred learning, exploring nature and a guest speaker with some wonderful friends!</p>	<p>Science <u>Science Understanding</u> Living things have a variety of external features (ACSSU017) Living things live in different places where their needs are met (ACSSU211) <u>Science as a Human Endeavour</u> Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE021) People use science in their daily lives, including when caring for their environment and living things (ACSHE022) <u>Science Inquiry Skills</u> Participate in guided investigations to explore and answer questions (ACIS025) Represent and communicate observations and ideas in a variety of ways (ACIS029)</p> <p>GENERAL CAPABILITIES:  CROSS CURRICULUM PRIORITIES: </p>
2	Save planet Earth	<p>Mother Earth is calling all Earth Conservers! Students are set to action to assist Mother Earth spread the word about Earth’s precious resources of soil and water and how to be sustainable conservationists. Experiments and activities are hands on following a water wise trail, engaging in water conservation games, feeding the compost worms, planting seedlings and creating an action plan for the environment. Students will even leave with their own ‘grassy head’ to care for.</p>	<p>Science <u>Science Understanding</u> Earth’s resources are used in a variety of ways (ACSSU032) <u>Science as a Human Endeavour</u> Science involves observing, asking questions about, and describing changes in, objects and events (ACSHE034) People use science in their daily lives, including when caring for their environment and living things (ACSHE035) <u>Science Inquiry Skills</u> Pose and respond to questions, and make predictions about familiar objects and events (ACIS037) Participate in guided investigations to explore and answer questions (ACIS038) Use informal measurements to collect and record observations, using digital technologies as appropriate (ACIS039) Use a range of methods to sort information, including drawings and provided tables and through discussion, compare observations with predictions (ACIS040) Represent and communicate observations and ideas in a variety of ways (ACIS042)</p> <p>GENERAL CAPABILITIES:  CROSS CURRICULUM PRIORITIES: </p>

3	<p><u>Heat it up</u></p>	<p>Students delight all of their senses as they become heat detectives. Students explore hands on ways by which heat is produced in a safe and supportive environment as they build a fire, study the behaviour of heat as it moves from one object to another while cooking damper and use their STEM skills to build their own conductive device to melt a smore. Students are encouraged to use scientific tools to measure heat and are immersed into Indigenous perspectives while learning traditional methods of heat production.</p>	<p><u>Science Understanding</u> A change of state between solid and liquid can be caused by adding or removing heat (ACSSU046)</p> <p><u>Science as a Human Endeavour</u> Science involves making predictions and describing patterns and relationships (ACSHE050) Science knowledge helps people to understand the effect of their actions (ACSHE051)</p> <p><u>Science Inquiry Skills</u> With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (AC SIS053) With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment (AC SIS054) Consider the elements of fair tests and use formal measurements and digital technologies as appropriate, to make and record observations accurately (AC SIS055) Use a range of methods including tables and simple column graphs to represent data and to identify patterns and trends (AC SIS057) Compare results with predictions, suggesting possible reasons for findings (AC SIS215) Reflect on investigations, including whether a test was fair or not (AC SIS058) Represent and communicate observations, ideas and findings using formal and informal representations (AC SIS060)</p> <p>GENERAL CAPABILITIES:     </p> <p>CROSS CURRICULUM PRIORITIES:  </p>
4	<p><u>Nemo Nurturers</u></p>	<p>Nemo, Dory and their reef friends all call for help in this exclusive invitation to explore the BIEEC aquarium. Focussing on sequencing the key stages in the clownfish life cycle, students observe the behaviour of a number of different species of clownfish in our aquarium along with other reef fish and use scientific tools to analyse the water quality of the aquarium. Using the latest virtual reality technology, students will also embark on a virtual expedition of the world’s different reefs and have hands on opportunities to explore the secret life of plankton through various microscopes and complete a STEM task to create models of plankton.</p>	<p><u>Science Understanding</u> Living things have life cycles (ACSSU072) Living things depend on each other and the environment to survive (ACSSU073)</p> <p><u>Science as a Human Endeavour</u> Science involves making predictions and describing patterns and relationships (ACSHE061) Science knowledge helps people to understand the effect of their actions (ACSHE062)</p> <p><u>Science Inquiry Skills</u> With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge (AC SIS064) With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment (AC SIS065) Consider the elements of fair tests and use formal measurements and digital technologies as appropriate, to make and record observations accurately (AC SIS066)</p> <p>GENERAL CAPABILITIES:    </p> <p>CROSS CURRICULUM PRIORITIES: </p>
5	<p><u>Adaptation agents</u></p>	<p>As adaptation agents, students utilise the beautiful location of the Boyne River and surrounds to explore the structural features and behavioural adaptations of living things to help them survive in their environment. Agents are taken on a muddy journey to explore the</p>	<p><u>Science Understanding</u> Living things have structural features and adaptations that help them to survive in their environment (ACSSU043_)</p> <p><u>Science as a Human Endeavour</u></p>

		<p>three key mangrove species of the local area. The interactive experience allows them to learn about specific adaptations to survive in the harsh, salty conditions as well as connect with the organisms that live in the habitat. Students then get up close and personal with water bugs and they catch, identify and zoom in using field microscopes to identify the different structural features of the insects.</p> <p><i>*This program depends on favourable tides and may not be available on your preferred days. BIEEC staff will guide you for suitable times.</i></p>	<p>Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083) <u>Science Inquiry Skills</u> With guidance, pose clarifying questions and make predictions about scientific investigations (ACSIS231) Reflect on and suggest improvements to scientific investigations (ACSIS091)</p> <p>GENERAL CAPABILITIES:  </p> <p>CROSS CURRICULUM PRIORITIES  </p>
6	<p>Life on Earth (Facing Island OR Canoe Point)</p>	<p>Students are called to action to determine the best environment to plant a certain species of tree. Taking on the role of Bio Explorers, students set upon their self-guided journey to investigate the physical conditions of different ecosystems that support our living things.</p> <p><u>Facing Island</u> - A short barge ride to the northern end of Facing Island in the Gladstone harbour is the setting for this program. Students explore the various ecosystems including salt marsh, coastal sand dunes, rocky shore and coastal Casuarina forest and are challenged to collect data on abiotic and biotic conditions at each area using scientific tools from their adventure pack. They also adopt the role of Citizen Scientists and collect marine debris entering this data into the Tangaroa Blue database and discuss the human impact on these ecosystems.</p> <p><i>Please note about this program:</i></p> <ul style="list-style-type: none"> • <i>This program can only run on a Wednesday due to suitable ferry times</i> • <i>This program has an early start time and later finish due to travel into Gladstone and barge times</i> • <i>This program involves approximately a 10km loop walk around the Northern end of the island</i> • <i>This program has an additional fee to cover the transport cost of the ferry for each student</i> <p><u>Canoe Point</u> – Set in the Canoe Point parklands at Tannum Sands, students explore the various ecosystems including salt marsh and mangroves, coastal sand dunes and rocky shore and are challenged to collect data on abiotic and biotic conditions at each area using scientific tools from their adventure pack.</p>	<p><u>Science Understanding</u> The growth and survival of living things are affected by physical conditions of their environment (ACSSU094) <u>Science as a Human Endeavour</u> Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions (ACSHE098) Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE100) <u>Science Inquiry Skills</u> With guidance, pose clarifying questions and make predictions about scientific investigations (ACSIS232) Compare data with predictions and use as evidence in developing explanations (ACSIS221)</p> <p>GENERAL CAPABILITIES:    </p> <p>CROSS CURRICULUM PRIORITIES  </p>

		<p><i>*Both these programs depend on favourable tides and may not be available on your preferred days. BIEEC staff will guide you for suitable times.</i></p>	
Yr 4-12	Extraordinary Leaders	<p>A high energy day focussing on personal and social awareness through team building games, critical and creative thinking opportunities, trust and communication activities and problem solving opportunities. Students are called to action with a mighty problem to solve throughout the day. Perfect for developing persistence and resilience, working collaboratively, recognising emotions and reflecting on experiences. A must for recognising potential leadership or refining current leadership skills, the day may include a high ropes session to challenge students or alternatively conquer the low ropes course depending on age and outcomes requested from schools.</p>	<p><i>All year levels link to the Australian Curriculum strand:</i> <u>GENERAL CAPABILITIES: PERSONAL AND SOCIAL CAPABILITY</u></p> <ul style="list-style-type: none"> • Self and Social Awareness • Self and Social Management <p>Year 4 – Level 3 Year 5 & 6 – Level 4 Year 7 & 8 – Level 5 Year 9 & 10 – Level 6</p>
Year level flexible	To the moon and back (evening)	<p>Students explore the wonder of the night sky and learn about stars, constellations, planets and astrology through various cultural stories. Indigenous perspectives are strong through this program looking at how Aboriginal and Torres Strait Islander people use the night sky. Technology is incorporated through the use of iPads, telescopes and virtual reality goggles. This evening program can be run at our Centre or we can come to your school.</p> <p><i>*This program typically runs for 2 hours with start and finish times negotiated between the school and BIEEC</i></p>	<p><u>Science</u></p> <p>Year 1 - Observable changes occur in the sky and landscape (ACSSU019) Year 3 - Earth's rotation on its axis causes regular changes, including night and day (ACSSU048) Year 5 - The Earth is part of a system of planets orbiting around a star (the sun) (ACSSU078) Light from a source forms shadows and can be absorbed, reflected and refracted (ACSSU080) Year 7 - Predictable phenomena on Earth, including seasons and eclipses, are caused by the relative positions of the sun, Earth and the moon (ACSSU115) Year 10 - The universe contains features including galaxies, stars and solar systems, and the Big Bang theory can be used to explain the origin of the universe (ACSSU188)</p> <p><u>GENERAL CAPABILITIES:</u>  <u>CROSS CURRICULUM PRIORITIES</u> </p>
Year Level Flexible Yr6+	Monumental Mountains (Mt Larcom climb)	<p>Students are set to conquer the mighty Mt Larcom in this outdoor adventure pursuit. Explore the native flora and fauna while learning about navigation and topographical mapping, use a compass and survey the landscape including ridges, saddles, gullies etc. Focussing on personal and social awareness, students will have their resilience tested and explore their emotions as they work together to help everyone succeed. Students are treated with 360 degree views of the Gladstone region at the summit and celebrate the remarkable achievement with a self-reflection activity. <i>This challenge requires a moderate degree of fitness but is achievable for students year 6 and up.</i></p>	<p><i>All year levels link to the Australian Curriculum strand:</i> <u>GENERAL CAPABILITIES: PERSONAL AND SOCIAL CAPABILITY</u></p> <ul style="list-style-type: none"> • Self and Social Awareness • Self and Social Management <p>Year 6 – Level 4 Year 7 & 8 – Level 5 Year 9 & 10 – Level 6</p> <p><u>GENERAL CAPABILITIES</u>  <u>CROSS CURRICULUM PRIORITIES</u> </p>

<p>Year Level Flexible</p>	<p>Exploring environments (Mangroves, dunes, rocky shore, eucalypt forest, freshwater Facing Island)</p>	<p>Students engage in hands on experiences to thoroughly investigate and explore a variety of environments in our local area. Biotic and abiotic data is gathered and various technology and equipment is utilised to collect the required information. Human impact and sustainability will also be discussed to care for these precious places. Choose an environment to study: Mangroves, dunes, rocky shore, eucalypt forest, freshwater, coastal island Facing Island</p>	<p>Australian Curriculum: Science & HPE (dependent upon year level)</p> <p><u>GENERAL CAPABILITIES</u>  <u>CROSS CURRICULUM PRIORITIES</u> </p>
<p>Yr 11-12</p>	<p><u>Biology field work – data collection</u></p>	<p>This day enables students studying senior Biology to gather raw primary data from local environments to add value to their syllabus requirements. Biotic and abiotic data is gathered, scientific methods of data gathering is explored and various technology is provided to assist with data collection. BIEEC staff provide local area knowledge of various species of organisms. Follow up work for data analysis can be arranged for future dates.</p>	<p><u>BIOLOGY SENIOR SYLLABUS</u> Unit 3 Biodiversity and the interconnectedness of life - students will collect data using sampling methodology to support completion of the mandatory practical from Unit 3.</p> <ul style="list-style-type: none"> · Determine species diversity of a group of organisms based on a given index · Use the process of stratified sampling to collect and analyse primary biotic and abiotic field data to classify an ecosystem · Select and appraise an ecological surveying technique to analyse species diversity between two spatially variant ecosystems of the same classification

Year level	Program	Overview	Curriculum Links
Short courses or Skill programs (2 days or more)			
Year Level Flexible	<u>Surf Awareness</u>	Students soak up the sun at Tannum Sands main beach to learn how to interpret surf conditions and water safety, how to swim and body surf safely, perform rescues, basic first aid and CPR along with beach games and activities. Authentic surf rescue gear is used such as rescue tubes and boards to give students real world experiences.	Australian Curriculum: Science & HPE (dependent upon year level)
10-12	<u>Pool Snorkelling Skills</u>	Students learn all the essential skills of snorkelling in a closed environment of a pool. Skills include an introduction to all the gear, entries, finning, duck diving, surfacing, clearing a snorkel, clearing a mask and some rescue techniques. Students can be assessed as part of school based curriculum or syllabus or engage in the course as a stand-alone program. Upon completion, students should be competent to enter open water snorkelling environments.	<u>AQUATIC PRACTICES SENIOR SYLLABUS:</u> R1.1 People engage with the aquatic environment in different ways. R1.2 Scientific principles explain how objects behave in the water. R2.2 Specialised skills are required to safely participate in aquatic activities.
10-12	<u>Boat licence – RMDL</u>	Students undertake a course where they learn all the essential skills of boating. Students complete the skills forward, reverse and turning in a vessel then combine these movements into manoeuvres such as anchoring, object retrieval, high speed turns and mooring/birthing. Passing a theory component and short exam will deliver students their nationally recognised boat licence. Students can be assessed as part of school based curriculum or syllabus or engage in the course as a stand-alone program.	<u>AQUATIC PRACTICES SENIOR SYLLABUS:</u> <ul style="list-style-type: none"> • Dimension 1: <i>Knowing and understanding</i> • Dimension 2: <i>Analysing and applying</i> • Dimension 3: <i>Planning and evaluating</i>
10-12	<u>Canoe/ Kayak skills</u>	Students learn to handle their canoe and/or kayaks as part of a skill development course. They will learn forward and reverse paddling techniques, sweeps and turns, steering, draw and pry strokes and rescue techniques. Students utilise local environments of the Boyne River or Lake Awoonga for skill based sessions and uncover the beauty of our natural environment. Students can be assessed as part of school based curriculum or syllabus or engage in the course as a stand-alone program.	Australian Curriculum: HPE & General Capabilities (dependent upon year level)

Year level	Program	Overview	Curriculum Links
<i>Specialty/Invitational camps</i>			
6	<u>Leaders Lead</u>	Exclusively provided to Primary School leaders, this invitational leadership program brings students from the local Gladstone Region together to network and provide a legacy to their respective schools. The program begins with a 2 day residential camp program focussed on developing the capacity of primary school students to lead in their schools during term 1. The program uses hands on activities to encourage team work, clear communication techniques, using initiative and critical and creative thinking skills. These skills are presented through influential guest speakers from the community that engage and inspire the students to strive. During the camp students propose, workshop and implement an ongoing leadership project back in their school environment with support and liaising from the staff at BIEEC throughout the year finishing with a culminating event where students present their project to their peers in term 4.	<p><u>GENERAL CAPABILITIES: PERSONAL AND SOCIAL CAPABILITY – Level 4</u></p> <ul style="list-style-type: none"> • Self and Social Awareness • Self and Social Management • Developing Leadership element: initiate or help to organise group activities that address a common need <p><u>HPE :</u></p> <ul style="list-style-type: none"> • Practise skills to establish and manage relationships (ACPPS055) • Examine the influence of emotional responses on behaviour and relationships (ACPPS056) • Explore how participation in outdoor activities supports personal and community health and wellbeing and creates connections to natural and built environments (ACPPS059) • Identify how valuing diversity positively influences the wellbeing of the community (ACPPS060) • Participate positively in groups and teams by encouraging others and negotiating roles and responsibilities (ACPMP067) • Apply critical and creative thinking processes in order to generate and assess solutions to movement challenges (ACPMP068)
8	<u>Yallarm Indigenous STEM Camp</u>	This 4 day immersive STEM program is aimed specifically at year 8 Indigenous students who are typically underrepresented in the STEM arena. Working closely with partners from CQU and Monadelphous, students engage in environmental STEM, problem solving, coding, visit the CQU STEM Central at the uni, visit the uni’s Seagrass lab and listening to various STEM professionals. Students also connect with indigenous elders and engage in cultural sessions. Students present a final product to peers, parents and school representatives at the end of the week.	<p><u>TECHNOLOGY – DESIGN AND TECHNOLOGY:</u></p> <ul style="list-style-type: none"> • Critique needs or opportunities for designing and investigate, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas (ACTDEP035) - • Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques <p><u>SCIENCE:</u></p> <p><i>Inquiry Skills:</i></p> <ul style="list-style-type: none"> • Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (AC SIS139) • Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (AC SIS140) • Measure and control variables, select equipment appropriate to the task and collect data with accuracy (AC SIS141) • Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (AC SIS148)

9	<p><u>QAL 'STEMtacular Woman' Camp</u></p>	<p>An invitational year 9 girls STEM camp aiming to expose and engage this underrepresented demographic to the STEM field through the funding support from Queensland Alumina Limited (QAL). During the 5 day experience, girls undertake many impact studies and activities conducting 'Green STEM' which is STEM in, about and for our environment. Activities include solving real world problems such as water filtration and quality or engineering a hydraulic arm. A field studies day with the Coastal Marine Ecosystems Research Centre (CQU) staff immerses students into hands on learning understanding the importance of seagrass, sampling specimens and collecting seagrass seeds and flowers at Curtis Island. QAL representatives also support the program through activities and field studies. Students engage with a variety of guest speakers across the STEM fields continue to inspire students to uptake STEM subjects in the senior years and into tertiary studies.</p>	<p>SCIENCE:</p> <ul style="list-style-type: none"> • People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities (ACSHE160) • Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (AC SIS166) • Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies (AC SIS169) • Use knowledge of scientific concepts to draw conclusions that are consistent with evidence (AC SIS170) • Critically analyse the validity of information in primary and secondary sources and evaluate the approaches used to solve problems (AC SIS172) • Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations (AC SIS174) <p>TECHNOLOGY: DESIGN AND TECHNOLOGY</p> <ul style="list-style-type: none"> • Critically analyse factors, including social, ethical and sustainability considerations, that impact on designed solutions for global preferred futures and the complex design and production processes involved (ACTDEK040) • Develop, modify and communicate design ideas by applying design thinking, creativity, innovation and enterprise skills of increasing sophistication (ACTDEP049) • Work flexibly to effectively and safely test, select, justify and use appropriate technologies and processes to make designed solutions (ACTDEP050) • Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability (ACTDEP051)
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Year level	Program	Overview	Curriculum Links
Citizen Science Programs			
Year Level Flexible	<u>Harbour Watch</u>	Port Curtis Harbour Watch is a school and community based program monitoring marine and catchment waterways in the Gladstone Harbour and surrounding environment. Students are able to better understand water chemistry and the parameters that are tested for, use specialised equipment to gather data and look at benthic organisms and water bugs to assist in determining the health of the waterway. Students can be assessed as part of school based curriculum or syllabus or engage in the learning as a stand-alone program.	Australian Curriculum: Science (dependent upon year level)
Year Level Flexible	<u>AUSMAP</u>	AUSMAP (Australian Microplastics Assessment Project) is a collaborative citizen science program aimed at collecting data on microplastics on Australian beaches. This program engages citizens in monitoring Australian shorelines with standard methods and uploading data. Education and behaviour change campaigns can be established once determining the type and origin of some of the microplastics leading to a better environment. Students can be assessed as part of school based curriculum or syllabus or engage in the learning as a stand-alone program.	Australian Curriculum: Science (dependent upon year level)
Year Level Flexible	<u>Coral Watch</u>	CoralWatch is a citizen science program based at The University of Queensland working with volunteers worldwide to increase understanding of coral reefs, coral bleaching and climate change. CoralWatch developed the Coral Health Chart in 2002. The chart standardises changes in coral colours, and provides a simple way for people to quantify coral health and contribute to the CoralWatch global database. Students can match the coral colour chart to live corals and determine the health of the local corals. Students can be assessed as part of school based curriculum or syllabus or engage in the learning as a stand-alone program.	Australian Curriculum: Science (dependent upon year level)

Year Level Flexible	<u>Mangrove Watch</u>	MangroveWatch is a citizen science program that focuses on the research, education and conservation of mangrove and tidal wetland environments globally. Much of the work is channelled through our flagship program that is built on partnerships between scientists, community volunteers and traditional owners. Students are involved in the filming and GPS tagging of mangroves in estuary systems while out on Centre vessels. Students can be assessed as part of school based curriculum or syllabus or engage in the learning as a stand-alone program.	Australian Curriculum: Science (dependent upon year level)
Year Level Flexible	<u>Tangaroa Blue</u>	Tangaroa Blue Foundation is an Australia-wide not-for-profit organisation dedicated to the removal and prevention of marine debris: one of the major environmental issues worldwide. To successfully solve the problem, the Australian Marine Debris Initiative (AMD I) was created, an on-ground network of volunteers, communities and organisations that contribute data to the AMD I Database. Students collect marine debris and contribute to the database. They work on solutions to stop the flow of litter at the source through education and behaviour change. Students can be assessed as part of school based curriculum or syllabus or engage in the learning as a stand-alone program.	Australian Curriculum: Science (dependent upon year level)