

Moreton Bay Environmental Education Centre Curriculum Plan

Version 8.4

Whole-school curriculum planning plays a key role in enabling Moreton Bay Environmental Education Centre to deliver the Australian Curriculum for all students and reflects the decisions, resources and priorities of the Centre.

Curriculum planning documentation is dynamic and subject to continuous monitoring and review.

This whole of centre curriculum plans provides a snapshot of our P-12 program offerings.

Detailed explanations of the Moreton Bay EEC curriculum plan can be viewed via:

- Program (Unit) Plan
- Program Overviews
- Program Itineraries (which include learning intentions)

on the Moreton Bay EEC website



Moreton Bay Environmental Education Centre respectfully acknowledges the Aboriginal and Torres Strait Islander Peoples and Country throughout Meanjin and surrounding areas in Metropolitan Region. We recognise their strong connections to the land, waters and country and pay our respects to Elders, past, present and emerging.



Cross-Program Emphasis

GENERAL CAPABILITIES C Critical and creative thinking: Students develop capability in critical and creative thinking as they learn to generate and evaluate knowledge, clarify concepts and ideas, seek possibilities, consider alternatives and solve problems. Critical and creative thinking involves students thinking broadly and deeply using skills, behaviours and dispositions such as reason, logic, resourcefulness, imagination and innovation in all learning areas at school and in their lives beyond school. Inquiring - identifying, exploring and organising information and ideas: Pose questions; identify and clarify information and ideas; organise and process information. > Generating ideas, possibilities and actions: Imagine possibilities and connect ideas; consider alternatives; seek solutions and put ideas into action. Reflecting on thinking and processes: Think about thinking (metacognition); reflect on processes; transfer knowledge into new contexts. \geq Analysing, synthesising and evaluating reasoning and procedures: Apply logic and reasoning; draw conclusions and design a course of action; evaluate procedures and outcomes. Personal and social capability: Students develop personal and social capability as they learn to understand themselves and others, and manage their relationships, lives, work and learning more effectively. Personal and social capability involves students in a range of practices including recognising and regulating emotions, developing empathy for others and understanding relationships, establishing and building positive relationships, making responsible decisions, working effectively in teams, handling challenging situations constructively and developing leadership skills. > Self-awareness: Recognise emotions; recognise personal qualities and achievements; understand themselves as learners; develop reflective practice. \triangleright Self-management: Express emotions appropriately; develop self-discipline and set goals; work independently and show initiative; become confident, resilient and capable. \triangleright Social awareness: Appreciate diverse perspectives; contribute to civil society; understand relationships. Social management: Communicate effectively; work collaboratively; make decisions; negotiate and resolve conflict; develop leadership skills. Ethical Understanding: Students develop ethical understanding as they identify and investigate the nature of ethical concepts, values and character traits, and understand how reasoning can assist ethical judgement. Ethical understanding involves students building a strong personal and socially oriented ethical outlook that helps them to manage context, conflict and uncertainty, and to develop an awareness of the influence that their values and behaviour have on others. It does this through fostering the development of 'personal values and attributes such as honesty, resilience, empathy and respect for others', and the capacity to act with ethical integrity. Understanding ethical concepts and issues: Recognise ethical concepts; explore ethical concepts in context. > Reasoning in decision making and actions: Reason and make ethical decisions. Exploring values, rights and responsibilities: Examine values; explore rights and responsibilities; consider points of view. **CROSS-CURRICULUM PRIORITIES** Y.

Aboriginal and Torres Strait Islander histories and cultures: Provides opportunities for all students to deepen their knowledge of Australia by engaging with the world's oldest continuous living cultures. Through the Australian Curriculum, students will understand that contemporary Aboriginal and Torres Strait Islander communities are strong, resilient, rich and diverse. The Aboriginal and Torres Strait Islander Histories and Cultures priority uses a conceptual framework to provide a context for learning. The framework comprises the underlying elements of Identity and Living Communities and the key concepts of Country/Place, Culture and People. Aboriginal and Torres Strait Islander Identities are represented as central to the priority and are approached through knowledge and understanding of the interconnected elements of Country/Place, Culture and People. The development of knowledge about Aboriginal and Torres Strait Islander Peoples' law, languages, dialects and literacies is approached through the exploration of Cultures. These relationships are linked to the deep knowledge traditions and holistic world views of Aboriginal communities and/or Torres Strait Islander communities.

- > Organising Ideas Key Concepts:
 - 1. Highlights the special connection to Country/Place by Aboriginal and Torres Strait Islander Peoples and celebrates the unique belief systems that connect people physically and spiritually to Country/Place.
 - 2. Examines the diversity of Aboriginal and Torres Strait Islander Peoples' culture through language, ways of life and experiences as expressed through historical, social and political lenses. It gives students opportunities to gain a deeper understanding of Aboriginal and Torres Strait Islander Peoples' ways of being, knowing, thinking and doing.
 - 3. Addresses the diversity of Aboriginal and Torres Strait Islander societies. It examines kinship structures and the significant contributions of Aboriginal and Torres Strait Islander Peoples on a local, national and global scale.

Sustainability: Sustainability addresses the ongoing capacity of Earth to maintain all life. Sustainable patterns of living meet the needs of the present without compromising the ability of future generations to meet their needs. Actions to improve sustainability are individual and collective endeavours shared across local and global communities. They necessitate a renewed and balanced approach to the way humans interact with each other and the environment. Education for sustainability develops the knowledge, skills, values and world views necessary for people to act in ways that contribute to more sustainable patterns of living. It enables individuals and communities to reflect on ways of interpreting and engaging with the world. Sustainability education is futures-oriented, focusing on protecting environments and creating a more ecologically and socially just world through informed action. Actions that support more sustainable patterns of living require consideration of environmental, social, cultural and economic systems and their interdependence.

> Organising Ideas - Key Concepts:

- 1. Explores the interdependent and dynamic nature of systems that support all life on Earth and our collective wellbeing.
- 2. Enables a diversity of world views on ecosystems, values and social justice to be discussed and recognised when determining individual and community actions for sustainability.
- Aimed at building capacities for thinking and acting in ways that are necessary to create a more sustainable future. The concept seeks to promote reflective thinking processes in young people and empower them to design action that will lead to a 3. more equitable and sustainable future.



Prep – 3 Curriculum Plan

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Year	Program	Overview	Curriculum links		General Capabilities							-curricu riorities	urriculum orities	
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Prep	Living by the Bay (Science)	<i>Living by the Bay</i> invites students to take on the role of Super Scientists and immerses them in a sensory exploration of Moreton Bay. Students gain hands on experience using scientific equipment to identify living and non-living things.	Australian Curriculum: Science Foundation Year (ACSSU002, ACSIS011, ACSIS012, ACSHE013)				✓	~	~		✓		✓	
Prep	Minibeasts (Science)	The <i>Minibeasts</i> program allows students to investigate and identify living things in a garden habitat within their own school environment. Taking on the role of an entomologist, students determine how the survival needs of different plants and animals are met.	Australian Curriculum: Science Foundation Year (ACSSU002, ACSIS011, ACSIS012, ACSHE013)	~			✓	✓	✓		✓		✓	
1	Habitat Heroes (Science)	Students are invited to become <i>Habitat Heroes</i> , learning about living things in the Bay and how they can help to protect them. Students participate in a variety of hands-on scientific investigations as they explore the Bay's habitats and inhabitants.	Australian Curriculum: Science (ACSSU017, ACSSU211, ACSHE021, ACSHE022, ACSIS025, ACSIS029)				✓	✓	✓		✓		~	
1 and 2	Connect with Heritage (History)	<i>Connect with Heritage</i> takes place at historic Newstead House where students, as History Detectives, compare Brisbane in the 1840s to today. They explore the house and grounds, participate in activities from the past and construct maps and timelines.	Australian Curriculum: HASS (ACHASSI018, ACHASSI019, ACHASSI020, ACHASSI023, ACHASSI026, ACHASSK028, ACHASSI034, ACHASSI035, ACHASSI039, ACHASSI042, ACHASSK044, ACHASSK045, ACHASSK046, ACHASSK049)	<	✓		✓	~	~		✓		~	
2	Go With the Flow (Science)	Go with the Flow focuses on the sustainability of our water resources by immersing students in the catchment of Wynnum Creek, following its course until it meets Moreton Bay. Students conduct experiments and collect samples ultimately developing an understanding of how water flows through a catchment, what might impede this flow and how to mitigate this.	Australian Curriculum: Science (ACSSU030, ACSSU032, ACSHE034, ACSHE035, ACSIS037, ACSIS038, ACSIS040)	~	✓		~	~	~		✓		~	
2	Small Town, Big History (HASS)	Students explore the history of significant sites in the local community of Dunwich, North Stradbroke Island and how it connects to the present. Students are introduced to a variety of sources, including an indigenous presentation, investigation of various historic sites and a study of photographs and objects from the past.	Australian Curriculum: HASS (ACHASSI035, ACHASSI036, ACHASSI037, ACHASSI039, ACHASSI042, ACHASSK044, ACHASSK045, ACHASSK046, ACHASSK048, ACHASSK049)	<			~	~	~	~	~		~	
3	Birds and Beaches, Dogs and Leashes (Science)	<i>Birds and Beaches, Dogs and Leashes</i> prompts students to consider their responsibilities to protect other forms of life that share the environment. A real-life geographical inquiry encourages students to think creatively about how they can take an active role in protecting the shorebirds and the environment of Moreton Bay.	Australian Curriculum: HASS (ACHASSI053, ACHASSI060, ACHASSK068) Australian Curriculum: Science (ACSSU044, ACSSU048, ACSHE051,) Australian Curriculum: English (ACELY1676)	~			~	~	~		✓		~	
3 and 4	History in a Box (History)	The Theatre-In-Education day program 'History in a Box', set in Fort Lytton National Park, provides the context for an inquiry into the significant historical features of the Moreton Bay area and the influence of the community in shaping this site, both in the past and today. Through use of drama, students explore the connection of Fort Lytton to local and world events, places, people and the corresponding eras of history. They actively interrogate the physical site and historical sources. Theatre-In-Education actors build an appreciation of the events, people and lifestyles that influenced the local area, including Indigenous peoples.	Australian Curriculum: HASS (ACHASSI052, ACHASSI053, ACHASSI055, ACHASSI056, ACHASSI059, ACHASSK062, ACHASSK063)	~			~	✓	~		✓		✓	



Year 4 – 6 Curriculum Plan

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4	First Contact (History)	<i>First Contact</i> focuses on the initial contacts between Aboriginal and European people in Moreton Bay. Students participate in an Indigenous presentation and a range of hands- on activities that were essential for survival. Students develop a deeper understanding of local Indigenous Culture and reflect on historical events and how they shaped the area.	Australian Curriculum: HASS (ACHASSI073, ACHASSI076, ACHASSI077, ACHASSI080, ACHASSK083, ACHASSK084, ACHASSK086, ACHASSK088, ACHASSK089)	~	~	`	/ ,		✓	~	~		✓	
4	Mangroves and the Environment (Science)	Students gain an understanding of the important role mangroves play in maintaining ecosystem health. Students sequence key stages in the lifecycle of crabs and mangroves and gain an understanding how living things depend on each other to survive. Throughout the day, there is a focus on feeding relationships between the plants and animals in the ecosystems observed.	Australian Curriculum: Science (ACSSU072, ACSSU073, ACSHE062) Australian Curriculum: HASS (ACHASSK088)	~		`	/ ,		✓		~		~	
5	Colonial Brisbane (History)	[Under development] Colonial Brisbane takes place at historic Newstead House where students are immersed in Theatre-in-Education. Students explore the house and grounds, participate in activities from the past and construct maps and timelines comparing past and present.	Australian Curriculum: HASS (ACHASSI094, ACHASSI095, ACHASSI096, ACHASSI097, ACHASSI098, ACHASSI099, ACHASSK106, ACHASSK107, ACHASSK110, ACHASSK113)	~		``	/ ,	/			~		✓	
5	St Helena Stories (History)	<i>St Helena Stories</i> uses story as a medium for engaging students in historical events and places. Each student follows the biography of an authentic, individual prisoner with students actively engaging in making observations, investigating heritage structures and interpreting sources for evidence of the past.	Australian Curriculum: HASS (ACHASSI095, ACHASSI096, ACHASSI097, ACHASSI098, ACHASSI102, ACHASSK106, ACHASSK107, ACHASSK110, ACHASSK113)	~		1	/		✓	~	✓		✓	
5 and 6	Overboard and Underwater (Geography or Science)	Overboard and Underwater has students adopt the role of Environmental Managers to explore different marine environments, discovering how living things are affected by the physical environment and how human activity impacts upon this. Students observe and catalogue marine debris, investigating possible impacts of this on these marine environments.	Australian Curriculum: HASS (ACHASSK113, ACHASSK120, ACHASSI095 / ACHASSI123, ACHASSI096 / ACHASSI124, ACHASSI101 / ACHASSI129, ACHASSI102 / ACHASSI130, ACHASSI104 / ACHASSI132) Australian Curriculum: Science (ACSSU094, ACSHE081 / ACSHE098, ACSHE083 / ACSHE100, ACSIS086 / ACSIS103, ACSIS087 / ACSIS104, ACSIS090 / ACSIS107, ACSIS091 / ACSIS108)		~	,	< ,		✓		~		~	
6	Immigration (History)	<i>Immigration</i> immerses students in the past with Theatre-in-Education and exploration of historical sites. Students trace the journeys of migrants arriving in Australia, asking why people choose to migrate to Australia, where they come from and what they contribute to Australia and our society. Students are encouraged to articulate questions, formulate answers, participate in problem solving and ask ethical questions on many levels.	Australian Curriculum: HASS (ACHASSK135, ACHASSK136, ACHASSK137, ACHASSI123, ACHASSI125, ACHASSI126, ACHASSI127, ACHASSI129)	~		,	· ,		✓	✓	~		✓	



Year 7 – 10 Curriculum Plan

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Year Level	Program	Overview	Curriculum links
7	Organising Organisms (Science)	In Organising Organisms, students adopt the role of Ecologists to identify organisms in two different habitats, St Helena Island and Moreton Bay. Students do a plankton trawl, conduct investigations under microscopes and design dichotomous keys. Throughout the day there is a focus on classification and organisms feeding relationships in the ecosystems observed.	Australian Curriculum: Science (ACSSU111, ACSSU112, ACSHE120, ACSHE121, ACSIS124, ACSIS125, ACSIS130)
7	Water in our World (Geography)	Water in our World has students investigate the sea turtle population decline in Moreton Bay, determine significant impacts and recommend suitable strategies. Students observe land uses and water flow and make links between mangroves and water health.	Australian Curriculum: Geography (ACHGK037, ACHGK038, ACHGS050, ACHGS051, ACHGS052, ACHGS054)
9	Returned World War I (History)	<i>Returned World War I</i> is a Theatre-in-Education program that journeys back to the time of the Great War to explore the personal, social and political impacts of war. The program addresses impact before, during and after soldiers had returned to Australia. Based at the World War I heritage sites of Fort Lytton and the Lytton Quarantine Station, students are engaged in a deep exploration of complex ideas about the cause and effect of historical events and the changes this war brought to Australian society.	Australian Curriculum: History (ACDSEH021, ACDSEH095, ACDSEH096, ACDSEH097, ACHHS165, ACHHS168, ACHHS170, ACHHS172, ACHHS173, ACHHS175)
10	Frontline Brisbane 1942 (History)	Using drama, image, artefacts and story to explore life in World War II, students are exposed to broader events taking place across the world and resulting effects on humanity. Students utilise academic skills as they interrogate primary and secondary sources to deepen their understanding and formulating a live photograph capturing one aspect of the war.	Australian Curriculum: History (ACDSEH024, ACDSEH108, ACDSEH109, ACDSEH110, ACHHS182, ACHHS188, ACHHS190, ACHHS191, ACHHS193)
10	The War Years: Americans at Newstead (History)	The <i>War Years: the Americans at Newstead</i> is a half day program that engages young people, using Theatre-in-education, in the culture clash experienced by the people of Brisbane when the 'American Invasion' of US service personnel occurred during WWII's expansion into the South Western Pacific from 1941.	Australian Curriculum: History (ACDSEH024, ACDSEH108, ACDSEH109, ACDSEH110, ACHHS182, ACHHS188, ACHHS190, ACHHS191, ACHHS193)
10	Overboard and Underwater (Geography)	In Overboard and Underwater, students adopt the role of Citizen Scientists or Environment Managers to observe marine debris and investigate impacts on marine environments. Students travel on Moreton Bay to identify microplastics and investigate types of marine debris using the Tangaroa Blue method and national standard for rubbish audits. They analyse and evaluate management strategies and recommend ways to minimise marine debris using systems thinking and geographical criteria.	Australian Curriculum: Geography (ACHGK070, ACHGK073, ACHGK074, ACHGK075, ACHGS074, ACHGS076, ACHGS077, ACHGS080)



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General Capabilities							P	Cross-curriculum Priorities					
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Year 11 – 12 Curriculum Plan

			Secondary
Yr Lv	Program	Overview	Curriculum links
		<i>Moreton Bay Studies</i> is a day program supporting completion of the mandatory practicals from Unit 3, Biodiversity and the interconnectedness of life. Students, in the role of biologists, use a stratified sampling process to conduct an ecological survey of sites in Moreton Bay.	General Senior Syllabus - Biology Unit 3 Biodiversity and the interconnectedness of life - students will collect data mandatory practicals from Unit 3.
11 and 12	Moreton Bay Studies	 Studies, primarily focused on the marine ecosystems around Green and St Helena Islands, include: Determination of species diversity using Simpson's diversity index across two spatially variant sites Investigation of environmental factors limiting the distribution and abundance of species in an ecosystem 	 Determine species diversity of a group of organisms based on a given in Use the process of stratified sampling to collect and analyse primary bio Select and appraise an ecological surveying technique to analyse species same classification
11 810 12	(Biology)	 Interpretation of data to classify and name an ecosystem Evaluation of strengths and limitations of data collection methodologies to appraise the ecological survey techniques used 	IA1: Data test - data is available to assist with the formulation of this assessment IA2: Student experiment - students complete the primary data collection and the
		 Applying data analysis techniques used Applying data analysis techniques to identify relationships in the data and test for statistical significance of the effects Communication of experimental findings about ecosystem dynamics using graphical techniques including standard error bars 	 Science as a Human Endeavour International biodiversity protection Marine reserves
11 and 12	Moreton Bay Studies (Marine Science)	 Moreton Bay Studies is a day program supporting completion of the mandatory practicals from Unit 2, Marine Biology. Students, in the role of marine scientists, use a stratified sampling process to conduct an ecological survey of sites in Moreton Bay. Studies, primarily focused on the marine ecosystems around Green and St Helena Islands, include: Determination of species diversity using Simpson's diversity index across two spatially variant sites Investigation of environmental factors limiting the distribution and abundance of species in an ecosystem Evaluation of strengths and limitations of data collection methodologies to appraise the ecological survey techniques used Applying data analysis techniques to identify relationships in the data and test for statistical significance of the effects Communication of experimental findings about ecosystem dynamics using graphical techniques including standard error bars 	 General Senior Syllabus – Marine Science Unit 2 Marine Biology - students will collect data using sampling methodology to Conduct an investigation to determine factors of population dynamics a Assess the processes and limitations of the sampling techniques Use field guides and identification keys to identify and describe marine s Calculate the biodiversity of a marine ecosystem using Simpson's divers Science as a Human Endeavour Discuss how scientists use the evidence from the monitoring and assess ecosystem resilience and population recovery. Scientific evidence is used to inform the development of criteria that evidence management. Effective marine ecosystem management is informed by the development knowledge in gathering data, identifying indicators and ensuring measu
11 and 12	Port of Brisbane Studies (Geography)	 Land Cover Transformations - Port of Brisbane Studies is a day program (five hours) immersing students in a geographic inquiry to investigate local land cover transformations in a mangrove forest at the Port of Brisbane and the challenge of maintaining healthy mangrove forests in order to support biodiversity and coastal protection. This program supports the mandatory practical from Unit 3 Topic 2, Responding to local land cover transformations. Students survey a mangrove ecosystem to collect data to support understanding of biodiversity, where and how land cover has changed and natural areas adjacent to the Port, why they must be protected, and some of the management issues. The field study is primarily focused on around the river and on Whyte Island, Port of Brisbane and may include: Use of transects and quadrats to collect both biotic and abiotic data within different mangrove forest zones and Whyte Island boat ramp Data collection for comparative analysis using conceptual models (Mangrove Succession Model) and to support biodiversity studies (Simpson's diversity index) Environmental management of Port impacts on mangroves and saltmarsh 	 General Senior Syllabus – Geography Unit 3 (Topic 2): Responding to land cover transformations – Students investiga geographical processes involved, how these shape the identity of places and imp challenges of sustainable responses. Unit Objectives: Explain geographical processes by describing the features, elements and processes that shape the identity of places and result in land cover char Comprehend geographic patterns by recognising spatial patterns of land regional and local scales of study and identifying relationships and impli Analyse geographic data by selecting and interpreting climate and land relationships represent a geographical challenge for a specific place in A cover type. Assessment: Investigation – Field report (IA2)



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lata using sampling methodologies to support completion of the

index

biotic and abiotic field data to classify an ecosystem cies diversity between two spatially variant ecosystems of the

ent.

then create a research question to modify the experiment.

to support completion of the mandatory practical from Unit 2. and assess abiotic components of a local ecosystem

ne species ersity index (SDI)

essment of an ecosystem to inform scientific knowledge about

evaluate the success of regional zoning plans and plans of

ment of complex models requiring a broad range of scientific surement is valid and reliable.

igate a local land or water management challenge and explain the mpacts of land cover for the biophysical environments and

and interactions between biophysical and anthropogenic nange of Earth's surface and a changing climate.

and cover change and indications of climate change at global,

plications for people and places.

nd cover data and information to infer how patterns, trends and n Australia, and in relation to climate change for a selected land