

S.Y7.U7 - Food webs in the Marine Environment – Year 7

Food chains and complex food webs are constructed from first-hand observation of plants and animals which are identified using keys. How we as humans impact on this ecosystem is also identified. The key hands-on and practical components from **Curriculum into the Classroom - Science Unit 7 Organising organisms, lessons 1, 2, 4, 5, 9, 10 & 11** are undertaken at the centre supporting a marine based response to the C2C unit's assessment item.



Day Visit program

YEAR 7 Science – Australian Curriculum and C2C Mapping					
ACARA	Science as a Human Endeavour	<p>Nature and developing science Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world (ACSHE119) Science knowledge can develop through collaboration and connecting ideas across the disciplines of science (ACSHE223)</p> <p>Using and Influencing science Science and technology contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations (ACSHE120) Science understanding influences the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management (ACSHE121) People use understanding and skills from across the disciplines of science in their occupations (ACSHE224)</p>			
	Science Inquiry Skills	<p>Questioning and Predicting Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (ACSIS124)</p> <p>Planning and Conducting Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (ACSIS125) In fair tests, measure and control variables, and select equipment to collect data with accuracy appropriate to the task (ACSIS126)</p> <p>Processing and Analysing data and Information Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships, including using digital technologies as appropriate (ACSIS129) Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions (ACSIS130)</p> <p>Evaluating Reflect on the method used to investigate a question or solve a problem, including evaluating the quality of the data collected, and identify improvements to the method (ACSIS131) Use scientific knowledge and findings from investigations to evaluate claims (ACSIS132)</p> <p>Communicating Communicate ideas, findings and solutions to problems using scientific language and representations using digital technologies as appropriate (ACSIS133)</p>			
	Science Understandings	<p>Biological Science There are differences within and between groups of organisms; classification helps organise this diversity (ACSSU111) Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions (ACSSU112)</p>	<p>Chemical Science Mixtures, including solutions, contain a combination of pure substances that can be separated using a range of techniques (ACSSU113)</p>	<p>Earth and Space Science Predictable phenomena on Earth, including seasons and eclipses, are caused by the relative positions of the sun, Earth and the moon (ACSSU115) Some of Earth's resources are renewable, but others are non-renewable (ACSSU116) Water is an important resource that cycles through the environment (ACSSU222)</p>	<p>Physical Science Change to an object's motion is caused by unbalanced forces acting on the object (ACSSU117) Earth's gravity pulls objects towards the centre of the Earth (ACSSU118)</p>
	C2C	<ul style="list-style-type: none"> Organising organisms Affecting organisms 	<ul style="list-style-type: none"> Water - Waste not, want not Water - Waste not, want not-continued 	<ul style="list-style-type: none"> Heavenly bodies Sensational Seasons 	<ul style="list-style-type: none"> Moving right along - Exploring motion Moving right along - applications in real systems
	Nudgee Beach EEC programs	Food webs in a Marine Environment	Water Fresh or Salty –Waste not want not		

ACARA	General Capabilities	<p>Literacy</p> <ul style="list-style-type: none"> • Comprehending texts through listening, viewing and reading • Composing texts through speaking, writing and creating • Text knowledge • Grammar knowledge • Word knowledge • Visual knowledge <p>Numeracy</p> <ul style="list-style-type: none"> • Recognising and using patterns and relationships • Using spatial reasoning • Interpreting and drawing conclusions from statistical information • Using measurement <p>Information and communication technology capability</p> <p>Queensland student ICT expectations</p> <ul style="list-style-type: none"> • Inquiring with ICT • Operating ICT • Investigating with ICT • Managing and operating ICT <p>Critical and creative thinking</p> <ul style="list-style-type: none"> • Inquiring - identifying, exploring and clarifying information • Generating innovative ideas and possibilities • Reflecting on thinking, actions and processes • Analysing, synthesising and evaluating information <p>Personal and social capability</p> <ul style="list-style-type: none"> • Self-management • Social management <p>Ethical behaviour</p> <ul style="list-style-type: none"> • Understanding ethical concepts and issues
	Cross Curriculum Priorities	<p>Aboriginal and Torres Strait Islander histories and cultures</p> <p>Students will</p> <ul style="list-style-type: none"> • explore how Aboriginal peoples and Torres Strait Islander peoples maintained ecological balance through understanding their own role within food webs and their dependence upon them . • Explore how Western practices in Australia have interrupted this delicate balance within the environment and its subsequent effects upon Indigenous Australians. • explore Aboriginal Peoples' and Torres Strait Islander Peoples' knowledge of the seasons and understand the importance of seasons to Indigenous People. • explore Aboriginal peoples' knowledge and methods of how water was obtained in arid areas of Australia • explore Aboriginal peoples' connection of ideas across the disciplines of science to locate water • explore the respect for, and reliance on, water by Aboriginal peoples. • discuss Aboriginal peoples' and Torres Strait Islander peoples' perspectives relating to the phases of the Moon • discuss Aboriginal peoples' and Torres Strait Islander peoples' perspectives relating to eclipses. <p>Sustainability</p> <ul style="list-style-type: none"> • Students will: • describe practices to minimise the human impact on a marine food web • plan the actions necessary to shape more sustainable futures relating to management of the marine environment • consider the sustainability of native food resources. • plan actions necessary to shape more sustainable futures relating to water management.