

Programme Outline

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Evolution: Patterns and Processes

LOCATION:	New Zealand Marine Studies Centre, Portobello, Dunedin
PROGRAMME DESCRIPTION:	<p>Explore living examples of adaptive radiation, divergent and convergent evolution. Students will use a range of tools for evolution. The programme includes analysis of fossils, biogeography, comparative anatomy, life histories, mRNA analysis. This also includes marine examples of allopatric and sympatric speciation.</p> <p>Support for NCEA Biology 3.4 AS 90717</p> <p>Extensions: Links well with Behaviour of Marine Invertebrates programme</p>
LEARNING OUTCOMES:	<ul style="list-style-type: none">• Students will describe processes and patterns of evolution.• Students will demonstrate an understanding of evolutionary processes leading to speciation. <p>Extras: Students will gain a new or renewed appreciation for marine life and the marine environment. Students will gain an understanding of marine science as a possible field of study or a future career.</p>
YEAR/LEVEL:	Year 13 level 8
CURRICULUM LINKS:	Living World:level 8, Ecology, Evolution. NCEA Biology 3.4 AS 90717 – This AS involves the description of processes and patterns of evolution.
KEY COMPETENCIES:	Thinking, managing self, relating to others. Nature of Science: understanding, investigating.
PRE TRIP PREPARATION:	Teachers should share and unpack the achievement standard requirements and assessment criteria with the students before coming. Some general background research on the tools used by scientists to understand evolutionary processes.
RESOURCES AVAILABLE TO SUPPORT PROGRAMME:	A student booklet for photocopying is sent out with booking confirmation.
REALTED TOPICS	Small Animal Study, animal behaviour, Behaviour of Marine Species
PROGRAMME COSTS	\$13 per student (GST excl.).
PROGRAMME LENGTH	4 hours
GROUP INFORMATION	We prefer groups of 15 students or more.
SAFETY ACTION PLAN	Laboratory: as per lab safety
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