# Programme Outline

**BOOKINGS:** Email: marine.studies@otago.ac.nz
Phone: 03 4795826

NEW ZEALAND MARINE STUDIES CENTRE University of Otago

## Behaviour of Marine Invertebrates

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| **LOCATION:** | New Zealand Marine Studies Centre, Portobello, Dunedin |

**PROGRAMME DESCRIPTION:**

Investigate behavior of marine animals in response to abiotic and biotic environmental factors. Aquarium interpretation with living examples of symbioses, predator/prey adaptations, reproductive strategies. Laboratory series of mini investigations with live examples of taxes and kineses, reproductive strategies.

Support for NCEA Biology 3.4 AS 90716

**Extensions:**
Can be combined with a two hour programme looking at sea bird behavior at the Royal Albatross Centre.
Email: education@albatross.org.nz or Phone Chris McCormack at (03) 478 0499

**LEARNING OUTCOMES:**

- Students will describe and discuss animal behavior in relation to environmental factors.
- Students will gain experience from living examples of orientation (taxes, kineses), timing (annual, tidal), interspecific relationships (predation, parasitism, mutualism, commensalism, competition for resources) and intraspecific relationships (territoriality, reproductive behaviours and competition for resources).

**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.

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| **YEAR/LEVEL:** | Year 13 level 8 |
| **CURRICULUM LINKS:** | Living World:level 8, life processes, Ecology, Evolution.<br>NCEA Biology 3.4 AS 90716 – This AS involved the description of animal behavior in relation to environmental factors. |
| **KEY COMPETENCIES:** | Thinking, Using language symbols and text, managing self.<br>Nature of Science: understanding, investigating, participating and contributing. |

**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 animal behaviour may be helpful.

**RESOURCES AVAILABLE TO SUPPORT PROGRAMME:** A student booklet for photocopying is sent out with booking confirmation.

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| **REALTED TOPICS** | Small Animal Study, animal behaviour. Biological Clocks |
| **PROGRAMME COSTS** | $7 per student (GST excl.). |
| **PROGRAMME LENGTH** | 2 hours |
| **GROUP INFORMATION** | We prefer groups of 15 students or more, but no more than 45. |
| **SAFETY ACTION PLAN** | On beach: as per field operations. Laboratory: as per lab safety |

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| **NZMSC CONTACT:** | Hanna Ravn<br>Email:hanna.ravn@otago.ac.nz<br>Phone: 03 479 5843<br>Mobile: +64 27 614 1799 |