

Behaviour of Marine Life

LOCATION: NZ Marine Studies Centre, Portobello, Dunedin

PROGRAMME DESCRIPTION:

Investigate the behaviour of marine species in response to abiotic and biotic environmental factors. Aquarium interpretation with living examples of symbioses, predator/prey adaptations, and 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 (03) 478 0499

LEARNING OUTCOMES

Students will:

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

Extras

Gain a new or renewed appreciation for marine life and the marine environment.

Gain an understanding of marine science as a possible field of study or a future career.

YEAR/LEVEL Year 13, Biology level 8

CURRICULUM LINKS

Living World: level 8, Ecology, Evolution. 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. 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 the tools used by scientists to understand evolutionary processes. Opportunity to use [NZMSC behaviour videos](#) on Youtube.

RESOURCES AVAILABLE TO SUPPORT PROGRAMME

A student booklet is sent out with booking confirmation.

RELATED TOPICS: Life Processes, explore the diverse ways in which animals and plants carry out life processes. Form and function, understanding animal adaptations in relation to their way of life

PROGRAMME COSTS: \$8-12.00 per student (GST excl.)

PROGRAMME LENGTH: 2-3 hours.

GROUP INFORMATION: Groups of 15 or more are preferred up to a maximum of 60 students. With 20 or more students we divide the group and rotate through activities.

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SAFETY ACTION PLAN:

In the field: as per field operations.

In Laboratory: as per Lab safety.

Covid guidelines: as per Government and University of Otago operations.

NZMSC CONTACT:

Rob Lewis

Email: rob.lewis@otago.ac.nz

Phone: 03 479 5843

Example itinerary

10.00 am

Arrive at NZ Marine Studies Centre

LAB: Introduction to the programme and H&S

10.10 am

AQUARIUM: animal behaviour in biotic interactions. Examples of competition, interspecific through symbiosis and predator/prey. Intraspecific through hierarchy, territory and reproduction.

10.45 am

Morning tea.

11.00 am

LAB: animal behaviour in time and space. Abiotic factors and biological clocks. Investigations with live animals.

11.50 am

LAB: Review of day.

12.00 pm

Depart NZ Marine Studies Centre.

Opportunity to extend the programme with either:

1. Local beach survey (**1hr, time dependent on low tide**)
2. Dissection of animal (1hr)