

Programme Outline

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



Small Animal Study

LOCATION:

New Zealand Marine Studies Centre, Portobello, Dunedin

PROGRAMME DESCRIPTION:

Students are guided through building background on the biology of one animal species and carrying out a practical investigation in a biological context.

Day one introduces the animal and its ecological context, animal handling, valid environmental variables and various animal responses. The day ends with students deciding on and formulating their own investigation.

Day two begins with an overview of bioethics in the practical context of research and education and their own investigations. Staff provide guidance for students as they set up and carry out their investigations. The day ends with a quick review.

Day three allows for a replicate and any minor changes students deem prudent as a result of review. The programme concludes with a quick guide to finding and using references and links to biological concepts in the interpretation, explanation and discussion of their investigation.

Programme Additional Options:

If desired a quick walk through relevant statistics, with a handout, can also be given (allow half an hour extra).

LEARNING OUTCOMES:

Students extend and apply concepts of adaptation and ecological niche to design and carryout their own practical biological investigation.

Students formulate and critique hypothesis formation and practice translation of sound hypothesis to rigorous methodology that addresses issues of validity and reliability.

Students carryout practical work and collect data to meet the needs of NCEA Bio 3.1 Achievement Standard 91601.

Students apply bioethical understanding to practical research with animals.

Students begin to make connections between their own research and biological concepts, models or other research.

Extras:

Students gain a new understanding of the depth, detail and determination needed in sound science.

Students may gain a new or renewed appreciation for marine life (particularly crabs) and the marine environment.

Students may gain a new appreciation of marine science as a possible field of study or a future career.

YEAR/LEVEL:

Year 13 level 8

CURRICULUM LINKS:

Living World:level 8, life processes, ecology and evolution.Understand the relationship between organisms And their environment. Develop and carry out investigations that extend their science knowledge.

KEY COMPETENCIES:

Thinking, language symbols and text, managing self .

Nature of Science: understanding, investigating, communicating, participating and contributing.

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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 crab adaptations and behaviours may be helpful.

RESOURCES AVAILABLE TO SUPPORT PROGRAMME: A student booklet for photocopying is sent out with booking confirmation. While on the programme, teachers can select suitable papers and readings to support student report writing from a comprehensive file held at the Centre. The Powerpoint presentations used to support bioethics and conceptual and resource links during the delivery of the programme are available to teachers on request (bring a USB stick).

LINKING PROGRAMMES:	Behaviour of Marine Invertebrates.
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PROGRAMME COSTS	Approx \$58 per student (GST excl.).
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PROGRAMME LENGTH	18 – 19 hours over 3 days.
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GROUP INFORMATION	We prefer groups of 15 students or more, but no more than 45. A group of 20 - 30 students is ideal.
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SAFETY ACTION PLAN

On beach: as per field operations

Laboratory: as per lab safety

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