

Mighty Molluscs

LOCATION: NZ Marine Studies Centre, Portobello, Dunedin

PROGRAMME DESCRIPTION:

What is a mollusc? Discover the characteristics that link snails, chitons, clams, octopus and more. What set of adaptations relate to their survival in particular niches? Classify molluscs, investigate how they feed and survey the intertidal zone to compare the distribution of the two chiton species. This programme includes experiences in a laboratory, on the rocky shore and opportunities to interact with live animals.

Extensions: Conduct an experiment looking at chitons response to light.

LEARNING OUTCOMES

Students will:

- Increase understanding of the relationship between niche and adaptation.
- Gain first-hand experience of animal classification.
- Develop an understanding of the relationship between morphology and functionality in the context of survival in a particular niche.

Extras

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

Gain a new appreciation of marine science as a possible field of study or a future career.

YEAR/LEVEL Years 9-10 (level 5-7) or science extension for intermediate accelerated students

CURRICULUM LINKS

Nature of Science (NoS): level 5-7 understanding, investigating.

Science: Living World: level 5-7 , Life Processes, Ecology, Evolution

KEY COMPETENCIES: Thinking, managing self, relating to others.

PRE TRIP PREPARATION: Some general understanding of the intertidal habitat, common molluscs and adaptations would be helpful.

RESOURCES AVAILABLE TO SUPPORT PROGRAMME

A student booklet with supporting worksheets is supplied with booking confirmation.

Shell Identification poster along with All About Shells posters are available upon request.

Class sets of Rocky shore and Sandy and Muddy Shore identification guides are available.

RELATED TOPICS: Intertidal ecology, form and function, adaptation, food webs, classification, survival, animal behaviour.

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

PROGRAMME LENGTH: 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 up and rotate through activities.

Example itinerary

9.30 am

Arrive at NZ Marine Studies Centre.

LAB: Intro and overview of the programme.

9.45 am

LAB: What is a mollusc? Evolution and characteristics.

10.00 am (time dependent on low tide)

Chiton survey!

LAB: Preparation of methods and gear.

SHORE: survey and light response.

LAB: Review of data.

11.00 am

Morning tea.

11.15 am

Rotate between stations of 20min.

i) LAB: Understand the rocky shore environment.

ii) AQUARIUM: Discover the feeding habits of molluscs.

iii) FOYER: Create a mollusc food web.

12.15 pm

Review of the day.

12.30 pm

Opportunity to stay for lunch / Depart NZ Marine Studies Centre.

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 Covid guidelines.

NZMSC CONTACT:

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