

SCIENCE YEARS 9 - 10

Rock Platform Ecology Fieldtrip

Stage 5 Sample CEC Fieldtrip

Narrabeen or Long Reef Aquatic Reserves



Student outcomes The students will learn to:

- 5WS Produce a plan to investigate identified questions, before their fieldtrip.
- 6WS Undertake first-hand investigations to collect valid and reliable data.
- 14LW Analyse interactions between components and processes within biological systems.
- 14LW1a b Describe how multicellular organisms respond to changes in their environment. Students also describe how the coordinated function of internal systems in organisms provide cells with the requirements for life.
- 14LW2f Evaluate a strategy used to balance conservation, ecosystem sustainability and human activities.

Pre – Fieldtrip Enquiry Based Investigation Planning

Using the CEC prepared page, students will recall three abiotic and biotic components on the rock platform. Students will plan how they will use a transect technique to investigate how water depth will affect the abundance and distribution of an animal on the rock platform. They will also consider how they can stay safe on the rock platform. It is preferable to do this in their small groups the period before their fieldtrip, but it can be done individually for homework.



Sample Program and suggested times for a mid day low tide.

- 10:30 Arrive at Fisherman's Beach or Narrabeen Headland, meet CEC Educators, for brief introduction on today's fieldtrip and a quick morning tea and toilet stop. Divide into smaller class groups if necessary, each group is led by a CEC Educator and with a school teacher supervising their class.
- 10:30 Walk to the Aquatic Reserve, discuss safety, human impact and current management. Students identify intertidal organisms and their habitats as they walk on the intertidal area just before low tide. Working in small teams, students will measure and record three abiotic components and the biodiversity of four main habitats.
- 11:00 **Working in small groups, students will begin their pre-planned fieldtrip investigation.** CEC field equipment will be provided and students will confirm the four animals that they will record along a transect. They will collect valid data to explain how water depth affects an animal's distribution and abundance. CEC Educators and supervising teachers will assist the quadrat groups and ensure they all stay safe.
- 11:45 In another section of the rock platform, students will choose a focus animal that they have seen during their fieldtrip, they will observe it closely. They will describe how the coordinated function of its internal systems enable it to feed, move and survive. Additional field resources will be available for this detailed investigation. Students will examine three other specific animal adaptations enable them to survive on the rock platform.
- 12:45 Students may leave the rock platform and collate, graph and interpret their first hand data in a sheltered location. Groups can enjoy a lunch break where there are toilets and shade nearby.
- 14:00 Conclude a great fieldtrip and travel back to school.

Please note: Please book early for low tides, there are only ~ 10 ideal dates available each year.

This is an enjoyable and productive program for the 2014 syllabus. Groups of more than 90 will be split into both Long Reef and Narrabeen sites so as to avoid congestion at each site.



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