

A habitat is the area where an organism or group of organisms live and breed. One habitat will be distinct from another due to its particular environmental conditions.

New Zealand's marine environment is incredibly diverse and made up of a large number of habitats. Important marine habitats are found in estuaries, fiords and on the continental shelf.

This worksheet offers a suggested pathway through Science Learning Hub education resources and connects to relevant programmes offered by NZ Marine Studies Centre. Click on the links below to create your own personalised teaching unit. Feel free to use this material in any combination or order.

Images from www.sciencelearn.org.nz

Exploring the theme

Focus question: *These photos show different marine habitats. What makes one habitat different to another?*



- www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Sci-Media/Images/Candida-Savage-diving
- www.sciencelearn.org.nz/Contexts/The-Noisy-Reef/Sci-Media/Images/Kelp
- www.sciencelearn.org.nz/Science-Stories/Research-Voyage-to-Antarctica/Sci-Media/Images/Antarctic-ice-cod
- www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Sci-Media/Images/Black-coral

Activities – use these activities to expand on the focus question:

- Deep ocean dive www.otago.ac.nz/marinestudies/resources/download/DeepSeaGame.pdf

Understanding the theme

Focus question: *Describe some key features of an estuary. Why do you think they are an important marine habitat?*

- Key terms > See ecosystem, habitat, land-use change and water column www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Key-Terms
- Info sheet > Marine habitats www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Science-Ideas-and-Concepts/Marine-habitats

- Info sheet > Environmental conditions affecting the sea
www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Science-Ideas-and-Concepts/Environmental-conditions-affecting-the-sea

Activities – use these activities to expand on the focus question:

- Estuary metaphors www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Teaching-and-Learning-Approaches/Estuary-metaphors

Applying the theme

Focus question: How does human activity on land affect marine habitats?

- New Zealand research > Estuaries and farmland run-off www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/NZ-Research/Estuaries-and-farmland-run-off
- Video > Farmland run-off into estuaries www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Sci-Media/Video/Farmland-run-off-into-estuaries

Activities – use these activities to expand on the focus question:

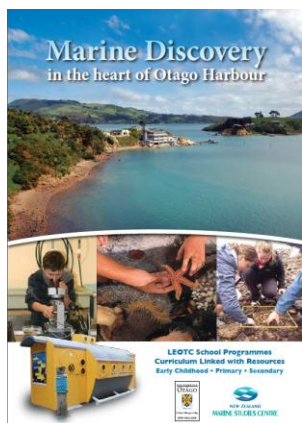
- Nutrient impact experiment www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Teaching-and-Learning-Approaches/Nutrient-impact-experiment
- Bird hotel www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Teaching-and-Learning-Approaches/Bird-hotel

Experiencing the theme

New Zealand Marine Studies Centre field trips (available in Otago & Nelson) include explorations of the coastal environment, laboratory sessions, boat trips and aquarium adventures:

W: www.marine.ac.nz

- Seashore scramble
- Deep sea denizens
- Voyage of Discovery



Marine Programmes 2012	
<p>Level 2-4</p> <p>Cruise on the replica 1912 Pilot Cutter. The historical, National Historic Landmark Bay of Islands will get you closer to life out this century's exploration. You will experience the life of a sailing vessel, including navigation, steering, rigging and sailing skills. They will also experience scientific observations like collecting and observing specimens, bottom sampling, & identifying wildlife.</p>	<p>Cost \$25 per student Includes lunch Bookings: 03 478 2222 www.marine.ac.nz</p>
<p>Level 2-5</p> <p>Manukau Bay Sea shore exploration. Discover the hidden world of the Manukau Bay. Through a series of interactive games and hands-on exploration, you will learn about the unique and diverse life that exists here. You will also learn about the importance of the bay to the local community and the environment.</p>	<p>Cost \$25 per student Includes lunch Bookings: 03 478 2222 www.marine.ac.nz</p>
<p>Level 2-4</p> <p>The Marine Road Show Bring the ocean to you! Your school will be invited to visit the Marine Road Show. This is a chance for your students to learn about the marine environment and the importance of the sea to our lives. The show will feature interactive games, displays and more.</p>	<p>Cost \$15 per student Includes lunch Bookings: 03 478 2222 www.marine.ac.nz</p>
<p>Level 2-5</p> <p>How Big? An exciting and programme exploring the size of animals in our world. You will learn about the different sizes of animals and how they survive. You will also learn about the importance of the sea to our lives.</p>	<p>Cost \$15 per student Includes lunch Bookings: 03 478 2222 www.marine.ac.nz</p>
<p>Level 2-5</p> <p>Sharks Inside and out Are sharks like the ones in your imagination? Find out the truth about sharks. You will learn about the different types of sharks and how they survive. You will also learn about the importance of the sea to our lives.</p>	<p>Cost \$15 per student Includes lunch Bookings: 03 478 2222 www.marine.ac.nz</p>
<p>Level 2-5</p> <p>Plankton and the ocean treasures Plankton are the tiny organisms that live in the sea. They are the foundation of the marine food chain. You will learn about the different types of plankton and how they survive. You will also learn about the importance of the sea to our lives.</p>	<p>Cost \$15 per student Includes lunch Bookings: 03 478 2222 www.marine.ac.nz</p>

This resource supports NZC Science Level 3/4

NATURE OF SCIENCE: UNDERSTANDING ABOUT SCIENCE: Appreciate that science is a way of explaining the world and that science knowledge changes over time.

- LIVING WORLD: ECOLOGY: Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human induced.
- LIVING WORLD: LIFE PROCESSES: Recognise that there are life processes common to all living things and that these occur in different ways.

Contact details

The New Zealand Marine Studies Centre, University of Otago, offers marine education programmes and resources for primary and secondary schools in southern New Zealand.

T: 03 479 5826

E: marine-studies@otago.ac.nz

W: www.marine.ac.nz

The Science Learning Hub provides resources for teachers for school years 5-10. It is developed by educators and teachers in collaboration with New Zealand scientists and funded by the Ministry of Science and Innovation (MSI).

T: 0800 023 579

E: enquiries@sciencelearn.org.nz

W: www.sciencelearn.org.nz