

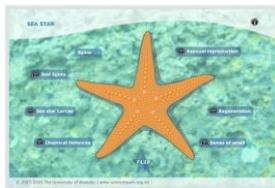
Adaptation is an evolutionary process whereby an organism becomes increasingly well suited to living in a particular habitat. Marine organisms have adapted to a great diversity of habitats and distinctive environmental conditions.

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: Look closely at one of these marine species and identify similarities and differences with humans.



- www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Sci-Media/Animations-and-Interactives/Sea-star
- www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Sci-Media/Images/Large-crayfish
- www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Sci-Media/Images/Blue-cod
- www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Sci-Media/Images/Bottlenose-dolphins

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

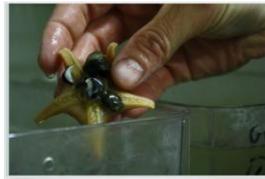
- Develop a classification system www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Teaching-and-Learning-Approaches/Develop-a-classification-system
- Seashore drama
www.otago.ac.nz/marinestudies/resources/download/sea_shore_drama%20.pdf

Understanding the theme

Focus question: How are different marine organisms adapted to the environmental conditions in the sea?

- Key terms > See adaptation www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Key-Terms
- Info sheet > Adaptations of marine organisms www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Science-Ideas-and-Concepts/Adaptations-of-marine-organisms
- 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
- Cockles: www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Looking-Closer/Cockles

- Sea stars: www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Looking-Closer/Sea-stars
- Video> Antarctic icefish www.sciencelearn.org.nz/Science-Stories/Research-Voyage-to-Antarctica/Sci-Media/Video/Antarctic-icefish



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

- Survivor seashore www.otago.ac.nz/marinstudies/resources/download/survivor.pdf

Applying the theme

Focus question: *In this video scientists are challenged by the ability of sea stars to drop limbs. How would this adaptation help the sea star to survive life in the sea?*



- www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Sci-Media/Video/How-do-you-electronically-tag-a-starfish

Focus question: *Think about the environmental conditions in the sea. Describe which sensory systems are most important in that environment and why.*



- www.sciencelearn.org.nz/Contexts/The-Noisy-Reef/Sci-Media/Video/Non-visual-sensory-systems

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

- Animal adaptations www.sciencelearn.org.nz/Contexts/Icy-Ecosystems/Teaching-and-Learning-Approaches/Animal-adaptations
- Hiding in plain sight www.sciencelearn.org.nz/Science-Stories/Research-Voyage-to-Antarctica/Hiding-in-plain-sight
- Design a seashore species > page 28 www.otago.ac.nz/marinstudies/resources/download/NZMSCRockyShoreActivityBook.pdf

