

LIFE ON THE ROCKY SHORE

The rocky shore is one of the most extreme and changeable places to live. Tides and swell brings crashing waves and predators, then drags the water away. The sun heats up shallow rock pools, and the wind dries or blows away the sand and rocks over time.

To survive such extreme conditions, animals living in the rocky shore home (or *habitat*) need a range of special features called *adaptations*. These adaptations help animals find food, water, oxygen, shelter and protect themselves so they can stay safe from the sea environment and other animals

Activity 1: Adapting to your habitat

What features or adaptations help animals on the rocky shore to find their food, breath, protect their young and themselves, and all the other things they need to survive?

Using books, research, and the Online Resources on page 4, complete the Animal Adaptation Table on the next page, including:

- **Animal name:** You can use common or scientific name
- **Physical adaptation:** a drawing and description of a body part which helps animal survive eg. to protect itself, eat, hide, shelter
- **Behavioural adaptation:** describe something the animal does to help them survive eg. only active at night(nocturnal) to hide from predators

You might want to make a list of adaptations for one animal, or a list of different adaptations for a range of different animals. See below a list of rocky shore animals found on the Great Ocean Road to choose from.

- Sea-biscuit
- Blue ringed octopus
- Maori octopus
- Limpet
- Mussel
- Decorator crab
- Chiton
- Moon snail
- Sea urchin
- Sea sponge
- Dog whelk
- Tube worm
- Glass shrimp
- Coral sponge
- Common shore eel
- Blenny
- Warrener snail
- Barnacle
- Elephant Snail
- Eleven-armed sea-star
- Waratah anemone
- Sea cucumber

ANIMAL ADAPTATION TABLE

ANIMAL NAME	PHYSICAL ADAPTATION Write or draw a feature on the animals body which helps them survive	BEHAVIOURAL ADAPTATION Write or draw something the animal does which helps them survive
EXAMPLE: <i>Shore Crab</i>	<i>Gills to breathe</i>	<i>Nippers for fighting predators</i>

Activity 2: What makes a habitat?

Choose a rocky shore animal and draw their habitat below, including:

- **Food:** find out what they eat in their habitat - plants, animals or both?
- **Shelter:** where does your animal hide or rest for safety, or hide their young?
- **Non-living environment:** this includes rocks, seawater, sand, sun, empty shells

Activity 3: Habitat change on the rocky shore

Unfortunately there are many human impacts which effect animals survival on the rocky shore. Using your books, school resources and Online Resources on page 5:

- Look up threats to the rocky shore habitat and the animals that live there
- In the table below, add these threats, how people can help protect these animals and what you will do to help
- Add these threats to your picture in Activity 2 in red

Threat to your animal or their habitat	What can people do to protect the animal and its habitat	What can YOU do to protect the animal and its home
Example People taking rocks home to use in their garden	Not take rocks from the rocky shore because this is important shelter for animals.	I will not take home anything from the rocky shore so the animal has everything it needs to survive in the habitat.

Online Resources

Rockyshore Plant and Animal Information and ID Guides

Life on the Edge Guide- Friends of the Bluff Barwon Heads

<http://designsdaddy.com/barwonbluff/wordpress/wp-content/uploads/2019/07/life-on-the-edge-2011-1.pdf>

Marine Animal and Plant Life ID: Friends of the Bluff Barwon Heads

<http://barwonbluff.com.au/bluff-life/marine-animals/>
<http://barwonbluff.com.au/bluff-life/marine-plants/>

Explore Victoria's Rocky shore ID and information guide: Parks Victoria

<https://juniorrangers.com.au/cms/wp-content/uploads/2015/08/Explore-Victorias-RockyShores-web-format.pdf>

Port Phillip Bay Marine ID Booklet

https://www.scubadoctor.com.au/downloads/Port_Phillip_Heads_Marine_National_Park_Identification_Booklet.pdf

Marine and Freshwater Discovery Centre Queenscliff

<https://vfa.vic.gov.au/education/featured/teachers-resource>

Rockyshore Habitat

Living on the Edge – Friends of the Bluff

<http://barwonbluff.com.au/habitats/intertidal-rocky-reefs/>

Adapting to Marine Habitats: Science Learning Hub

<https://www.sciencelearn.org.nz/resources/1126-adapting-to-marine-habitats>

Coastal Marine Habitats: Rockyshore – Qld Government

<https://www.qld.gov.au/environment/coasts-waterways/marine-habitats/rocky-shore>

Threats to rocky shores

Key threats to marine parks: Parks Victoria

<https://www.parks.vic.gov.au/get-into-nature/conservation-and-science/our-amazing-diversity/marine>

Human impact on the rocky shore: Pinelands Highschool

https://www.youtube.com/watch?v=ZkTGq5A_x7w

10 ways to care for our coastal environment

<https://www.academyofsurfing.com/news/10-ways-to-care-for-our-coastal-environment>

Plastic Free July: <https://www.plasticfreejuly.org/toolbox.html>

Plastic Oceans <https://plasticoceans.org/plastic-pollution-info-resources/>

Tangaroa Blue <https://www.tangaroablue.org/>

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**ENVIRONMENTAL
EDUCATION**

Caring for the Coast
and Community



Teachers Notes & Curriculum Links

This resource has been designed to cater for students from Foundation through to Level 6. It is suggested this be completed as a pre-excursion resource or to consolidate learning after visiting a coastal space. We hope your students enjoy and find this activity meaningful, and we would appreciate any photos, details or links to students work to inspire others. These can be sent to our Education team at education@gorcc.com.au.

VICTORIAN CURRICULUM LINKS	
LEVELS Foundation - 2	
Science	Elaborations
Living things have a variety of external features and live in different places where their basic needs, including food, water and shelter, are met (VCSSU042)	<ul style="list-style-type: none"> recognising common features of animals, for example, head, legs and wings describing the use of animal body parts for particular purposes, for example, moving and feeding recognising that different living things live in different places, for example, land and water exploring what happens when habitats change and some living things can no longer have their needs met
LEVELS 3 & 4	
Living things can be grouped on the basis of observable features and can be distinguished from non-living things (VCSSU057)	<ul style="list-style-type: none"> identifying variations in the features of animals, for example, body covering, ear shapes or number of legs
Science knowledge helps people to understand the effects of their actions (VCSSU056)	<ul style="list-style-type: none"> considering how the use of materials including solids and liquids can affect the environment in different ways, for example, fertilisers and food and drink containers exploring how science has contributed to understanding and resolving issues related to the effects of human activities, for example, clearing of bushland to build housing and roads and management of waste
LEVELS 5 & 6	
Living things have structural features and adaptations that help them to survive in their environment (VCSSU074)	<ul style="list-style-type: none"> explaining how particular adaptations aid survival, for example, nocturnal behaviour, silvery coloured leaves of dune plants describing and listing adaptations of living things suited for particular Australian environments
The growth and survival of living things are affected by the physical conditions of their environment (VCSSU075)	<ul style="list-style-type: none"> investigating how changing the physical conditions for plants impacts on their growth and survival, for example, changing salt water concentrations, using fertilisers or transferring to a different soil type

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