

Survival on a Rocky Reef

South Australia has many different kinds of cool-water marine habitats. The word 'temperate' describes habitats in this area; the opposite to warmer tropical waters. We don't have coral reefs in South Australia, but rather rocky reefs covered in many kinds of seaweeds. Life on the reef can be very harsh indeed! Imagine having waves crashing over you at high tide, the sun beating down on you at low tide and all the while having to hunt for your own food without becoming dinner for something else! Some plants and animals have developed some clever ways to survive life in the reef.

Name of Organism	Special Adaptations
Sea Anemone	Stinging cells in tentacles which catch and stun prey before dragging the victim into the stomach.
Leafy Seadragon	Very cleverly camouflaged to look like the seagrass and seaweed among which it lives.
Limpet	Has a hard shell to protect it from drying out at low tide and a very strong foot which it uses to cling to rocks. Some limpets produce chemicals which help to create a small depression in the rock underneath them, making them almost impossible to remove.
Tube Worm	Creates a hard shell-like tube as it grows. This tube often has a built-in trap door which makes it difficult for predators to get inside. The spaces between the tubes are often colonised by other animals.
Mussel	This mollusc has a hinged shell held together by a very strong muscle. The shell protects from predators and from drying out. Mussels often grow in clumps attached to rocks by fine, strong threads. They can survive a great deal of wave action.
Common Seahorse	This fish has a prehensile tail (like a possum) which can wrap around algae and seagrass and hold on tightly.
Cuttle	Cuttle are molluscs with shells on the inside and the body on the outside like a sock. They can squirt ink to create a 'smoke screen' which allows them to escape from predators and are masters of camouflage, changing colours very quickly in order to remain hidden against the background of the reef.

Brittle Star	The brittle arms of this sea star are composed of small jointed bands which allow it to move very quickly compared to other sea stars. One of the defense mechanisms of the brittle star is to break its arms off when in danger. The arms will grow again later. Brittle stars can also reproduce in this way.
Barnacle	Barnacles are crustaceans; they grow stuck to rocks or the shell of another animal and are often found in harsh environments. Instead of using their legs to walk with, barnacles use their legs to feed with. They have a sliding door at the top of their shell which opens to allow the legs of the barnacle to wave around in the water collecting tiny particles of food. Like all crustaceans, the shell of the barnacle does not grow with the animal. This means that every time the animal grows it must leave its old shell and find a new place to lodge before growing a new, larger shell.
Periwinkle	These snails have a rough tongue called a radula which they use to scrape their food, algae from the rocks. They also possess a shell which helps to prevent drying out and overeating.
Biscuit Star	These common sea stars are well camouflaged in many environments. Like most sea stars they feed by ejecting their stomach through their mouth and wrapping it around their prey, returning their stomach once the meal is complete. Their arms of 'rays' are covered with thousands of tiny suction cap feet which not only help the animal to move but also allow it to open the shells of cockles and mussels by gripping either side of the shell and applying constant force to gradually pull the shell open. The stomach is then ejected into the shell and the sea star has its meal.