MIKE CLEELAND:  
Hi, I'm Mike and we're here at San Remo back beach for the Coastcare Victoria Summer by the Sea program administered by the Department of Environment, Land, Water and Planning. We're on the Traditional lands of the Bunurong people here, for thousands of years, the Bunurong have been coming through here utilising resources of the intertidal zone and using San Remo as a crossing point over the popular Phillip Island in the background. So we'd like to acknowledge the Traditional Owners, their Elders of the Bunurong people, past, present and future and any other Elders from other groups who may be participating with us today. So what we're doing today, is we're looking at the different animals and plants in the rocky shoreline here. And we're looking at the different strategies that they use to cope and to survive in this difficult environment. Coastcare Victoria encourages everybody to take care of safety on the beach over the summer, make sure you've got a hat, plenty of sunscreen, plenty of water and in particular, know your tide conditions, know what the tide's going to do and know where there's any danger, (like) a swell's likely to be on your beach. A couple of other safety tips, not all of our marine animals are as friendly as we'd like to imagine. This particular one is the Blue-ringed Octopus. We make sure we keep a wide berth from those, and other ones that can cause trouble are the Cone shells. These ones are safe to handle because they don't have the live snail inside them but if they do, they're capable of releasing a venomous sting. OK, let's go down and have a close look at some of these interesting animals and plants.

We're here in the supratidal zone and this is the area, pretty much above high-tide, which really only gets a little bit of water twice a day at the very top of the high-tides, so there's not much life up here. Some of the only animals that do survive are these tiny little Blue Periwinkles. These are marine snails that are extremely good at resisting desiccation, some of the few things that can survive in this very dry, harsh, rocky environment up here.

Just in a short walk along the shoreline here, we've picked up some interesting indications of some of the animals that live in intertidal zone. So, this mussel for instance, and this clam and the oyster here, these are bivalves which have the capacity to open and shut their shells. So this one would open its shell at high-tide, it’s a filter-feeder so they would filter nutrition out of the water, and close their shells to prevent drying out at low-tide. And these Turbo shells have an interesting feature, an adaption to avoid predation, they have this operculum which is kind of like a door-way that fits in there, and that prevents the animal from being pecked by sea birds, such as Seagulls and Oystercatchers. The tide's going down now and the rock pools in the intertidal zone are becoming exposed. And just here we've found some very nice little sea anemones. These creatures have a special adaptation, they have these tentacles that they wave around in the water, to capture small particles of food. A lot of animals living here in the rock pools in the intertidal environment have to have some sort of protection such as crabs have the exoskeleton, the protective shell. We've got an interesting one here, called a Chiton, which is essentially a slug with armour plating. It crawls across the surface of the rock feeding on micro algae, and that armour plating, those shells across the back, protect it from being pecked by birds or attacked by any other animals. The third of our coastal zones is the subtidal zone, and obviously animals and plants living down there don't have the same problems with drying out as we do in the higher regions. But the problem they do face is the high energy environment, the big waves and the strong currents coming through. This Bubble Weed has a special adaptation to that, it has this holdfast, which is the part of the plant that it uses to hold on to the rocky substrate below the water. As well as the seaweeds in the subtidal zone, we have a huge range of interesting animals, indications of which sometimes appear on the shoreline. This interesting specimen is not a tooth, its actually the swim bladder of a Porcupine fish, otherwise known as a Pufferfish. It goes in here, in the chest cavity and if the Pufferfish wants to rise up in the water column, it inflates it with air, sort of floats closer to the surface. If it wants to swim further down, it expels the air and loses buoyancy. And we must have some sharks in the area because we're finding some shark's eggs. This is the Port Jackson Shark, and this is the Rusty Catshark, and they have a special adaptation of this curly bit at the bottom of the egg, which wraps around the seaweed and enables the shark egg to be held in position as the shark develops and grows.

So, today we've looked at the variety of life on the three zones along the coastline. The supratidal, intertidal and subtidal. And as we've seen, there's a huge variety of adaptations that creatures use to survive in those variable environments. So we hoped you've enjoyed learning about that today. Thanks for joining us and have a great summer.