

# What's in an Ecosystem?



## The Program

**Key Knowledge/Skills:** Unit 1 Environmental Science

OR

Unit 2 Biology: Dynamic ecosystems

**Outline:** Students will dive into Port Phillip Bay and explore how living and non-living organisms interact with each other to maintain a healthy balance in an ecosystem. They will also investigate the changes that have occurred to the environment overtime as a result of human intervention. Students will learn about negative impacts such as water pollution, overfishing and the introduction of exotic species, while positive impacts of Marine National Parks and fishing regulations will also be explored.

## The Tour

The tour generally consists of three snorkels - all of which are lead by Qualified Snorkel Instructors. Students are introduced to the water at Pope's Eye, where they are taught safe snorkeling practices in a sheltered environment. Part of the Port Phillip Heads Marine National Park, Pope's Eye has become a very popular dive site due to its abundance in marine life. Once comfortable with their equipment, students are then introduced to a population of young male Australian Fur Seals, followed by a snorkel with a pod of Bottlenose Dolphins. Due to their wild nature a swim with the dolphins cannot be guaranteed, but in the event that we do not find them we will endeavour to have a snorkel elsewhere. While on the boat, students will be entertained with activities such as a ride on the boom-net, a duck spa, and if time permits - fishing. Generally the program runs for 3.5 hours, but this can easily be shortened according to your needs. All equipment is provided - including wetsuit, fins, mask and snorkel, with snacks and drinks served throughout the journey.

## Key Knowledge/Skills

Environmental Science	Biology
<ul style="list-style-type: none"><li>• Components of ecosystems and environments</li></ul>	<ul style="list-style-type: none"><li>• Components of ecosystems</li></ul>
<ul style="list-style-type: none"><li>• Causes and effects of human-induced environmental changes, including water pollution and introduced species</li></ul>	<ul style="list-style-type: none"><li>• Relationships between organisms: parasite/host, predator/prey, mutualism and symbiosis</li></ul>
<ul style="list-style-type: none"><li>• Human-induced changes that contribute to the conservation and remediation of the environment</li></ul>	<ul style="list-style-type: none"><li>• Flow of energy: inputs and outputs of the system; productivity</li></ul>
<ul style="list-style-type: none"><li>• Interaction between organisms: predation, competition, mutualism and commensalisms</li></ul>	<ul style="list-style-type: none"><li>• Changes to ecosystem over time: human activity and sustainability of ecosystems</li></ul>
<ul style="list-style-type: none"><li>• Construct food chains and food webs for ecosystems</li></ul>	

**Feel it, Hear it, Taste it, Smell it, Sea it!**