

# Porci's Ocean Patrol Activity Sheet



## Series 1: Episode 9 – Notes for Educators

### Introduction

Welcome to Series 1: Episode 9 of Porci's Ocean Patrol (POP), a short, beautifully animated video that educates Reception to Year 4 students about the 'Great Southern Reef'.

Porci's Ocean Patrol is a Marine Discovery Centre project and can be accessed on YouTube and the Marine Discovery Centre website:

<https://www.marinediscoverycentre.com.au/porci-s-ocean-patrol>

These notes provide an outline of what young viewers can expect to see and discover when they view Episode 9. They also include key Episode 9 information to assist with student learning.

General introductory information relating to Porci's Ocean Patrol, and the presenters who appear in the videos, can be found on the Marine Discovery Centre website.

Let's get started!

### Series 1: Episode 9 (Run time – 9 minutes and 53 seconds)

Episode 9 begins with a short, general introduction for students to the 'Great Southern Reef', located off the coast of South Australia, and to the creatures that exist from the surface to the bottom of the ocean.

This episode (as with all future episodes) has three major themes:

THEMES	EPISODE 9 TOPICS	RUN TIMES
1. Tips for keeping the ocean healthy that everyone can do.	What makes a reef	0:38 to 3:35 minutes
2. Information about the sea creatures living in the ocean.	Zooplankton	3:36 to 5:34 minutes
3. About the culture of the Kurna people from the Adelaide Plains area.	Boomerangs	5:35 to 8:40 minutes

'Ocean Patrollers' (students) are also invited to send their questions into Porci.

### Question 1 (38 seconds into the episode)

Ocean Patroller, Alessandra, asks the first question:

*"What makes a reef?"*

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Georgie informs us that reefs are found all around the world's coastlines and deeper underwater. They can be made up of rocks or stony corals, depending on where they are growing.

Georgie shares that here in Australia, we have Ningaloo and the Great Barrier Reef which are built from tiny animals called coral polyps that prefer warm tropical waters. Whereas in the Great Southern Reef, our cooler and nutrient-rich oceans are favoured by seaweed-covered rocky reefs. Different critters and creatures will call each one of these different reefs home.

Georgie then lets us know that while corals and seaweeds love to live in the shallow sunny spots near the coast, there are some reef-building creatures such as oysters and sea sponges who are happy to live in the deeper and darker parts of the oceans. These animals will filter the water without needing any sunlight.

Port Noarlunga Reef is a place in South Australia where people love to snorkel, it is a rocky reef packed with different seaweeds, invertebrates and over 70 different types of fish.

Georgie then tells us how a reef can be either naturally made or artificially made by humans. Natural reefs will either be made up of corals or rocks while an artificial reef humans may use materials such as old tyres or sunken ships.

Lastly, we are informed about the Windara Reef on the Yorke Peninsula. This reef is important as it was the first shellfish restoration reef of its kind in South Australia. It was created with the purpose of supporting a healthier marine environment and providing more opportunities for recreational fishers.

## **Question 2** (3 minutes and 36 seconds into the episode)

Ocean Patroller, Toinetta, asks the second question:

*“What’s the smallest creature in the ocean?”*

Porci tells us about zooplankton and how they might be small, but they play a very large role in our ocean’s food chains. Zooplankton drift through the water by using the ocean’s currents.

Porci explains how there are thousands of different kinds of zooplankton ranging in size from small, microscopic ones to large jellyfish. Zooplankton also includes small creatures like copepods, mysids, and the larvae of larger animals. Lots of other animals will feed on the zooplankton from filter feeders to large whales.

Porci explains that some types of zooplankton make their bodies invisible and as clear as the ocean's waters so they can avoid being spotted and eaten by other animals.

Porci tells us that the food that zooplankton eats also plays an important role in our oceans. These are called Phytoplankton. Phytoplankton are tiny plant-like algae that use the sun to create their energy. This means that phytoplankton take up carbon dioxide and turn it into oxygen for us to breathe.

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**Question 3** (5 minutes and 35 seconds into the episode)

Ocean Patroller, Gianluca, asks Karno the third question:

*“What were Boomerangs used for?”*

Karno informs us that the traditional Kaurna name for a boomerang is a Wadna. These were designed by the First Scientist who were the clever Indigenous explorers and inventors of their time. They had to figure out how the world around them worked, they had to use their curiosity and creativity to solve problems, invent tools and understand the natural world.

Karno describes how boomerangs are moulded and cut to be aerodynamic, their rounded edges and wide surface area allow them to glide through the air with ease. This design has stood the test of time as it even inspired modern aeroplane wings.

Karno explains that there are different types of boomerangs each with their own unique function. Some were used for hunting, where they were aimed at the legs of kangaroos and emus while other boomerangs were larger and wielded in battles or for protection. Some boomerangs even doubled as a knife by slotting a shell into them or could be used as a musical instrument by tapping them together in a rhythmic harmony.

## POP Quiz Questions

The episode concludes with two multiple-choice POP quiz questions for students (answers in blue):

1. How many types of fish are in Port Noarlunga Reef?
  - A. 1 million
  - B. 2
  - C. 70
2. What tool do you need to see Plankton?
  - A. Sunglasses
  - B. Microscope
  - C. Goggles

## Asking Questions

Student Ocean Patrollers are invited to ask Porci questions. Submit any student questions using the following link:

<https://www.marinediscoverycentre.com.au/porci-s-ocean-patrol/ask-porci>

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## Facts for Students

A fact sheet for students has also been developed, and provided in PDF format, as a support document for 'Porci's Ocean Patrol' – Series 1, Episode 9.

## Activity Sheets

A range of activity sheets have been developed to complement the video and student facts. These cover Foundation to Year 4 learning levels (with many providing two levels of difficulty) and focus on the English, HaSS and Science learning areas.