

# PenguinIsland

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A **STUDY GUIDE** BY KATY MARRINER AND 360 DEGREE FILMS



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# Penguin Island

**T**he world-famous Little Penguins of Australia's Phillip Island entertain half a million tourists a year with a sunset parade from the surf to their burrows. But behind the scenes, the penguins' lives are even more interesting.

*Penguin Island* opens in the Australian spring as 26,000 Little Penguins return to their Phillip Island colony after many weeks at sea. While some search for loyal partners and others seek out a new mate, the Little Penguins set to work building and renovating their nests to keep them safe from predators. Soon the colony is full of chicks, and penguin parents take turns to babysit while their partner goes to sea to feed. With only eight short weeks before the chicks must learn to survive for themselves, it is a fraught and time-consuming business. When the fish disappear from the waters around Phillip Island, life in the colony gets tough and the battle for survival begins. To make matters worse, Phillip Island is experiencing the hottest summer on record and the rangers and carers must rescue penguins all across the colony.

Over six half-hour episodes, *Penguin Island* follows the penguins as a dedicated team of rangers and scientists monitor and protect them through the breeding season and a record-breaking heatwave.

Filmed over a year by series producer Sally Ingleton, director Simon Target and wildlife cinematographer David Parer, *Penguin Island* offers an insight into the lives of the stars of Phillip Island's internationally renowned Penguin Parade.

This study guide to accompany *Penguin Island* has been written for upper primary students and for secondary students of all year levels. At the secondary level, the study guide provides information and suggestions for learning activities in Biology, Environmental Studies, Geography, Media and Science. At a primary level the study guide provides information and suggestions for learning activities across the curriculum areas of English, SOSE/HSIE and Science.







## Episode guide

### Episode one: Love is in the air

In episode one of *Penguin Island*, we meet Bluey and Sheila, one of the many Little Penguin couples who live on Phillip Island, and the dedicated team of rangers and scientists who will monitor and protect them through the hottest summer on record.

Marg runs Phillip Island Nature Park's wildlife hospital and has over twenty years of experience with Little Penguins and other animals. Field researcher Leanne Renwick weighs and examines the penguins to ensure they are up to the task of breeding. Her colleague Elizabeth Lundahl-Hegedus is a parade ranger and has lived on the Summerland Estate for thirty years. It's a short walk from her house to the Penguin Parade.

We meet the feathered residents of the Penguin Café, a cluster of 'love nests' behind the busy Phillip Island tourist centre where perennial bachelor Rocky and the determined yet slightly dim-witted Spike vie for the attention of the passing females as they attempt to attract a mate.

Meanwhile, Bluey and Sheila lay their first clutch of eggs. While Sheila is off at sea hunting for food, the eggs hatch and Bluey must guard them until Sheila comes home.

### Episode two: Danger in the penguin colony

In episode two of *Penguin Island*, Bluey and Sheila are struggling to feed their hungry chicks, Sammy and Tom, and to protect them from predatory gulls, domestic pets and a feral fox that is stalking the colony.

As the rangers set out to hunt the fox, we meet the human residents of Phillip Island whose homes have been reclaimed by the government to make way for a penguin

protection zone – the first time in the world that human settlement has been removed in order to protect a single species.

We meet research manager Peter Dann, a world-renowned leader in the study of Little Penguins. He leads the scientific effort to study and protect the Little Penguins on Phillip Island. We visit Phillip Island's wildlife hospital where Marg Healy is working to save a Little Penguin whose life has been threatened by a careless fisherman.

Rocky continues his search for Mrs Right and loses out to an amorous neighbour, and hungry Sammy and Tom beg from the wrong neighbour with disastrous consequences, until Bluey returns to save the day.

### Episode three: Where have all the fish gone?

In episode three of *Penguin Island*, time is running out for hungry penguin chicks Sammy and Tom, whose parents Bluey and Sheila must swim further to sea in a desperate attempt to find fish. As the weather heats up, chicks are dying of starvation throughout the colony and the harshness of nature is revealed.

Ranger Elizabeth Lundahl-Hegedus keeps watch over the undernourished chicks, worried that they won't survive until their parents return to feed them, while another ranger, John Evans, patrols the colony, checking for offshore bait balls of fish, a sign that food is nearby and the parents will soon return.

In the burrow next door to Sammy and Tom, penguin parents Frank and Flora struggle to feed their boisterous teenagers, Butch and Bruiser. Scientists monitoring Phillip Island's penguins fit a satellite tracking device to Frank's back and are surprised to find that the plucky little penguin covers 240 kilometres in four days as the fish move further afield.



## Episode four: A heatwave hits the colony

In episode four of *Penguin Island*, a punishing heatwave hits the island, bushfires are raging around the state and Little Penguins are collapsing from heat, hunger and exhaustion. As the wildlife hospital fills with overheated wildlife, rangers work to rehydrate and cool the Little Penguins in a battle to save their lives.

With food in short supply, the colony's penguin chicks are struggling to build the body weight they require to head out to sea and, with 80 per cent destined to die in their first year, the stakes are high in the fight for survival. A volunteer arrives with an overheated penguin chick, underweight and close to death, but Mauve proves to be one of the lucky ones.

With his younger brother dead and his parents gone for good, little Sammy must survive Black Saturday to brave the world alone, taking his first tenuous steps towards independence and a life beyond the breaking surf.

## Episode five: Rocky finds love at last

In episode five of *Penguin Island*, unlucky-in-love Rocky finally finds a mate in Jess, whose previous clutch of chicks has died. But it is very late in the season to be raising chicks, being right before the Little Penguins' annual moult prevents them going to sea.

Jess endures a parasite infestation as she waits patiently with her newborn chicks, desperate for Rocky to return to feed them. He arrives just in time to save their sole surviving chick, Tilda. In the burrow next door, Spike and Tash's chicks are already preparing to head off on their own.

Meanwhile, Marg Healy gets her most difficult patient yet when a juvenile Australasian Gannet is found on the beach and proves more interested in biting her than in eating the fish that will keep him alive. Biologist Andre Chiaradia reveals just what Little Penguins get up to underwater, by attaching a tiny computerised logging device to an unwitting Little Penguin.

When moulting season arrives, the Little Penguins begin to shed their feathers. Hungry and grumpy, they must wait on shore until their new feathers grow so they are waterproof, weatherproof and able to return to the sea to fish.

## Episode six: Summer ends on Phillip Island

In the final episode of *Penguin Island*, Rocky and Jess' surviving chick Tilda is not yet big enough to feed herself and is anxiously awaiting the return of her parents. But time is running out as penguins around the island begin to moult. Unfortunately Tilda is abandoned by her mother, leaving only her father to feed her.

At sea a leaking oil tanker means disastrous consequences for the Little Penguins, and Marg Healy demonstrates how tiny knitted jumpers help to prevent the penguins from ingesting toxic fuel.

Down at the Penguin Parade, Andre Chiaradia and the scientists of Phillip Island are road-testing an automatic weighbridge, which accurately weighs the Little Penguins without human contact.

The house removal project on Summerland Estate is nearly complete, with the Wagner family and Elizabeth Lundahl-Hegedus ready to vacate the colony so the land can be returned to the Little Penguins.

Little Tilda has no choice but to brave a new life alone at sea. With no one to teach her how to swim or hunt for food, Tilda has just a 20 per cent chance of surviving the sharks, gulls, tankers and treacherous ocean currents.

## Little Penguins

Little Penguins are seabirds that cannot fly. They have a beak, feathers and lay eggs on land, two at a time. They have specially designed wings called flippers that they flap in a flying motion when swimming underwater. They can swim faster than humans with their webbed feet and they use their legs and tail as rudders.

Little Penguin feathers are small and spread over the body at four times the density of flying birds. Much time is spent preening and oiling feathers to keep them waterproof. A large oil gland at the base of the tail secretes a waxy substance that the penguin smears onto its beak and spreads onto its plumage. The Little Penguin's colouring of dark blue upper side and white underside make an excellent camouflage against both predator and prey.

Little Penguins are shallow divers (their Latin name *Eudyptula minor* means 'good little diver') and usually feed in waters less than fifty metres deep although dives of up to seventy metres have been recorded. They make an average of 700 dives per day. Their swimming speed is from three to four kilometres per hour. A Little Penguin can stay at sea for weeks. It will even sleep at sea, dozing as it floats on the surface.

The average lifespan for the Little Penguin is seven years. But there have been recorded cases of Little Penguins living to twenty-six years of age.



# The Little Penguins of Phillip Island

## Bluey and Sheila

Bluey and Sheila are long-term mates. Some penguin partners will stay together for years if they are successful at rearing a family. This breeding season they will try to raise a typical family of two chicks. Bluey and Sheila share incubation and babysitting duties. One stays at home with the eggs or chicks, while the other goes to sea to find fish. They depend upon each other and know they must protect their young from predators such as foxes and Pacific Gulls.

## Sammy and Tom

Sammy is a new chick, born early in the breeding season to Bluey and Sheila. He is an adventurous fellow, and together with his little brother Tom explores his neighbourhood. Sammy has a will to survive.

Tom is the younger and weaker of the two and has to compete with Sammy for food.

## Frank and Flora

Frank is a mature penguin and lives with his long-term mate Flora in a natural burrow. Frank is a survivor and manages to swim far enough to find food for his chicks. When he is chosen for satellite tagging, Frank also begins helping scientists understand where Little Penguins go at sea.

Flora has been with Frank for four years now. Flora is devoted to Frank and often comes outside to farewell him as he heads off to sea for the day. Together they are dedicated parents to their two boisterous and hungry chicks Butch and Bruiser. Both parents spend the summer travelling to and from the sea to make sure their chicks are getting the food that they need.

## Butch and Bruiser

Butch and Bruiser, young siblings, are creating havoc in the neighbourhood. Once they are a few weeks old, mum and dad leave them home alone while they go to scour the ocean to feed the hungry youngsters. Come nightfall, Butch and Bruiser will beg and attack any passing adult penguin, hoping it's their mum or dad coming home with dinner. Some of the wiser adults in the vicinity don't take too kindly to the young upstarts and their bully-boy tactics.

## Stan and Sparky

Stan and Sparky are chicks living under Karen Wagner's house on the Summerland Estate. Like many teenagers they are hesitant to leave home, preferring to keep sponging off mum and dad. Their sibling rivalry creates havoc, and their peeping and calling keeps the Wagners awake night after night.

## Rocky and Jess

Three-year-old Rocky is ready to start a family. He's built an A1 love nest and needs someone to share it. While Rocky is a talented home decorator, he is not so skilled at luring a female into his love nest. Early in the season, his heart is broken by a feisty young female, but later in the season he meets Jess.

Jess's first clutch of eggs died and late in the season she is looking for a new partner at the Penguin Café. She's picky but wants to have another go at rearing a family.



## Tilda

Jess' chick is called Tilda. She is born late in the breeding season and has got a struggle ahead of her. When her sibling dies and she becomes an only child, her chances of survival increase. Her life depends on both her parents feeding her regularly.

## Spike

Perennial bachelor Spike is Rocky's neighbour and rival at the Penguin Café. At two years of age, he's a trifle dim-witted and continually fussing over and renovating his nest. He competes with Rocky for the attention of the passing females. Spike's not as plump or handsome as some of the other Penguin Café lads, but he's in with a chance.

## Tash

Tash lost her chicks last year. She's on the lookout for a better match and is sizing up the lads at the Penguin Café.

## Foot

Found with a fishing line around his swollen left foot, Foot's limb is dying and he is in agony. He needs emergency veterinary care and time to recover before heading back to sea.

## Mauve

Mauve is heat stressed and dying in the sand. Thankfully he is rescued and rushed to the wildlife hospital, where he's packed into the fridge to help him cool down and given fluid to rehydrate.





MARG HEALY, WILDLIFE REHABILITATION OFFICER



LEANNE RENWICK, RESEARCH TECHNICAL OFFICER



ANDRE CHIARADIA, ZOOLOGIST

## Phillip Island Nature Park

Phillip Island Nature Park is located on Phillip Island, a small island 140 kilometres southeast of Melbourne, Victoria.

Phillip Island Nature Park is a not-for-profit conservation organisation that cares for and manages much of Phillip Island's environment and wildlife. All profits generated by the organisation are reinvested into conservation, the environment and the local community.

In the early 1930s, Mr and Mrs Spencer Jackson donated ten acres to the people of Victoria. This land was the home and breeding ground for Phillip Island's colony of Little Penguins. In 1996, the Victorian state government formed the Phillip Island Nature Park. Today, the Phillip Island Nature Park is regarded as a world-class eco-tourism attraction and covers 1,805 hectares of Phillip Island.

Phillip Island Nature Park encompasses the Penguin Parade, the Nobbies Centre, Seal Rocks fauna reserve, the Koala Conservation Centre, Cape Woolamai State Fauna Reserve, Oswin Roberts Reserve, Ventnor Koala Reserve, Fishers Wetland, Rhyll and Rowell's swamps, Summerland Estate, Newhaven Swamp, Rhyll Inlet and Churchill Island Heritage Farm.

## The researchers and rangers at Phillip Island

### Leanne Renwick – Research technical officer

Leanne Renwick has worked on the frontline of Little Penguin research for the past sixteen years. She conducts fieldwork with complete precision, monitoring and weighing penguins, measuring their beaks, and keeping satellite-tracked penguins under steady surveillance.

### Marg Healy – Wildlife rehabilitation officer

Marg Healy is the Dr Doolittle of Penguin Island. Healy has worked with penguins for twenty-six years and her knowledge of native animal care is extensive.

### Dr Peter Dann – Research manager

Known to bird lovers around Australia as 'Dr Penguin' or 'Penguin Pete', Dr Peter Dann is a world-renowned leader in the study of the Little Penguin. He has dedicated his life to the cause and now leads a research group carrying out investigations of Phillip Island's fauna.

### Dr Andre Chiaradia – Zoologist

Dr Andre Chiaradia is a zoologist who loves to use gadgets to find out more about the Little Penguin. There are many questions about what the Little Penguin gets up to out at sea and Chiaradia has an arsenal of gear that he employs to keep tabs on their marine adventures.

### Elisabeth Lundahl-Hegedus – Park ranger

Elisabeth Lundahl-Hegedus has lived and worked on Phillip Island for many years. She is a ranger at the Penguin Parade, controlling excited crowds of tourists while protecting her adorable penguins. Her favourite job is telling visitors about the Little Penguins.

### John Evans – Park ranger

John Evans has worked for over seventeen years at Phillip Island as a park ranger and has responsibility for the protection of the nature park habitat, animal husbandry and pest control for animals and plants. Trained in land management, Evans has the understanding required to balance the management of the long-term viability of the Little Penguins and their habitat with the needs of a public that can't get enough of the Little Penguins.





PENGUIN PARADE, 1947. © ARGUS COLLECTION



## The Penguin Parade

Little Penguins who live in a colony return to their nests in small groups within an hour or so of darkness. Their return is preceded by groups of penguins gathering beyond the surf where they may be heard calling to each other. These groups are called rafts. For the Little Penguins, it is a case of safety in numbers.

For over eighty years, people have been travelling to Phillip Island to watch the nightly parade of Little Penguins at Summerland Beach. Before the bridge to Phillip Island was built, visitors would catch a

ferry across Western Port, stay in guest houses in Cowes, then make their own way across the island to Summerland Beach to catch a glimpse of the Fairy Penguins (as they were once known) by moon and torch light.

In the 1920s, entrepreneurial islander residents Bert West, Bern Denham and Bert Watchorn started the first organised viewings of the penguins. They would meet visitors at the ferry, and five shillings would buy a personal tour of the island in a Willys-Knight sedan, with an extra shilling for strawberries and cream. Visitor numbers increased in the 1940s after the new bridge connected the island to the mainland at San Remo.

Tourists flocked to the island and holidaymakers built houses on areas surrounding the penguin colony. More and more people travelled to see the penguins, carrying blankets and picnic baskets down through the penguin colony to the beach, where they sat on the sand and watched the penguins walk around them on their way back to their burrows.

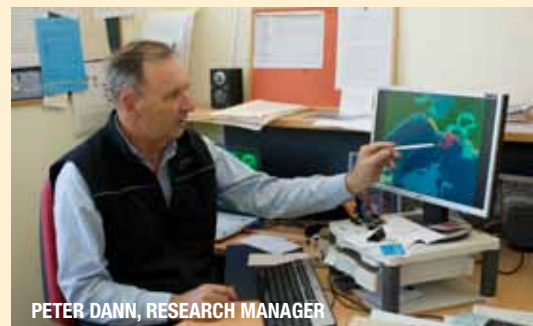
Gradually penguin habitats and burrows were damaged and dogs

and introduced foxes killed many of the little seabirds. The Little Penguin population began to decline. A radical response was required to protect the colony. In the 1960s, fences and viewing stands were built to prevent visitors standing on burrows. Since then, the construction of boardwalks, platforms and viewing boxes have further protected the Little Penguins and their habitats.

The Penguin Parade is open every day of the year. The best time to visit is at dusk.







PETER DANN, RESEARCH MANAGER

## How well did you watch the episodes of *Penguin Island*?

### Episode one

This episode provides information about the breeding habits of Little Penguins.

Can you answer the following questions about the breeding habits of Little Penguins?

- In what season do Little Penguins mate?
- How many eggs does a female Little Penguin lay?
- How many days does it take for a Little Penguin egg to hatch?
- What is the birth weight of a newborn Little Penguin?
- How do the roles of the male and female parents differ during incubation and feeding?
- For how long is a Little Penguin chick dependent on his or her parents?

### Episode two

This episode provides information about the predators of Little Penguins and the ways their existence on land and sea is threatened.

Can you answer the following questions about the predators of Little Penguins?

- Why are Little Penguin chicks vulnerable to predators?
- Why have the human inhabitants been removed from the Summerland Estate?
- What dangers do Little Penguins face at sea?
- What dangers do they face on land?
- What services exist to protect the Little Penguins of Phillip Island?

### Episode three

This episode provides information about the feeding habits of Little Penguins.

Can you answer the following questions about the feeding habits of Little Penguins?

- When and why do Little Penguins come home from sea?
- What do Little Penguin chicks eat?
- What is the mortality rate of Little Penguin chicks?
- What are bait balls?
- How far will Little Penguins swim to find food?
- How do the scientists find out where the penguins go when they are at sea?



LEFT: RESEARCHERS PLACE SATELLITE TRACKER ON PENGUIN  
RIGHT: SUMMERLAND BEACH, SITE OF PENGUIN PARADE





## Episode four

**This episode provides information about how a very hot summer threatens the existence of the colony of Little Penguins at Phillip Island Nature Park.**

Can you answer the following questions about the impact of extreme weather conditions on the colony of Little Penguins at Phillip Island Nature Park?

- Why do Little Penguins struggle to survive during heatwaves?
- How do Little Penguins reduce their body temperature?
- How much does a Little Penguin chick need to weigh before it can go to sea and beat the heat?
- What do Little Penguins drink?
- What strategies do the park rangers implement to help the Little Penguins survive a heatwave?

## Episode five

**This episode explains why Little Penguins moult.**

Can you answer the following questions about moulting?

- How do Little Penguins condition their feathers?
- What is moulting?
- Why do Little Penguins moult?
- When do Little Penguins moult?
- Where do Little Penguins go to moult?
- Will Little Penguins keep feeding their chicks once they start to moult?

## Episode six

**This episode provides information about how humans both endanger and protect the colony of Little Penguins at Phillip Island Nature Park.**

Can you answer the following questions about how humans both endanger and protect the colony of Little Penguins at Phillip Island Nature Park?

- Who protects the Little Penguins?
- Why must the park rangers and scientists limit their contact with the Little Penguins?
- What is the purpose of the weighbridge?
- Why is photography banned at the Penguin Parade?
- Why is oil a danger to Little Penguins?
- Why do chicks born late in the season seldom survive?



## Phillip Island

Have you ever visited Phillip Island Nature Park?

Tell the class about your trip to Phillip Island.

You might like to bring photographs or souvenirs to show the class.

## Using *Penguin Island* in a primary school classroom

Teachers may select from the following activities to support students' viewing and close analysis of *Penguin Island*. In selecting activities, teachers should remain mindful of the learning needs and abilities of individual students and of the class as a whole.

### Before viewing

- What type of animal is a Little Penguin?
- Have you ever seen a Little Penguin? Was it in the wild, in a zoo or in an aquarium?
- What do you know about Little Penguins? Write a fact about Little Penguins on a cardboard silhouette of one. What would you like to know about Little Penguins? Write

a question about Little Penguins on another cardboard silhouette of one. Pin your silhouettes to a class noticeboard.

### After viewing

- Spend time updating the class noticeboard. Are all the fact silhouettes accurate? Can you answer any of the question silhouettes?

### Little Penguins

Little Penguins are the smallest of the penguin species. They are also known as *Eudyptula minor* or Blue Penguins, and were once referred to as Fairy Penguins. Little Penguins live along the coast of southern Australia, including Tasmania, and in New Zealand.

- As you watch *Penguin Island*, gather facts about Little Penguins. Create a table to help you organise your notes. Use the following headings for columns in your table:

- Physical characteristics
- Habitat
- Diet and feeding
- Breeding
- Behavioural traits
- Predators and threats

Share the information that you have recorded with the class. Add any facts that you may have missed.

Use the table to create a brochure about Little Penguins that would appeal to children who visit the Penguin Parade at Phillip Island Nature Park. Your brochure should be a combination of words and images.







Use non-fiction books from the library and reliable internet sites to locate additional information about Little Penguins.

- Draw or download an image of a Little Penguin and then label its physical characteristics.
- Little Penguins have a busy annual cycle that changes with the seasons.

*Penguin Island* tells us about a year in the life of the Little Penguins of Phillip Island Nature Park.

Use this information and other information found online at <http://abc.net.au/penguinisland/> to design a calendar that explains the annual cycle of a Little Penguin.

- Make a 3D classroom display that shows the habitat of Little Penguins. The display could be a cross section of land and sea depicting penguins in their nests and in the water. Use branches and other natural material to produce a real-life effect.

- Working as a class, make a list of fictional stories about penguins.

Are any of these stories about Little Penguins?

What species of penguins are mentioned in these stories?

- Based on your viewing of *Penguin Island* and other research, write and illustrate a fictional story about a Little Penguin.



## Wildlife documentaries

*Penguin Island* provides students with the opportunity to become familiar with documentary as a genre.

A documentary is a non-fiction text that represents events and people from real life. The purpose of a documentary could be to provoke thought, to educate or to persuade. To be successful, a documentary needs to engage its audience.

- Have you watched other wildlife documentaries? Share your experiences of this genre with the class.
- As a class, make a list of the features of a wildlife documentary series.
- Compare *Penguin Island* with another wildlife documentary that you have watched by making a list of the similarities and differences.



## Using *Penguin Island* in a secondary school classroom

Teachers may select from the following activities to support students' viewing and close analysis of *Penguin Island*. In selecting activities, teachers should remain mindful of the learning needs and abilities of individual students and of the class as a whole.

### Before viewing

- Have you ever visited Phillip Island Nature Park? Share your experience with the class.

### After viewing

- Did you enjoy *Penguin Island*? Tell the class about one of your favourite moments.
- What aspects of Little Penguin behaviour did you find surprising?
- What are the big ideas of *Penguin Island*?

As a class make a list of the themes that are central to the narrative told by *Penguin Island*. Ask students to find an example of each theme.

- What will be achieved by telling the story of the Little Penguins?

### Studying a species

Little Penguins are the smallest of the penguin species. They are also known as *Eudyptula minor* or Blue Penguins, and were once referred to as Fairy Penguins. Little Penguins live along the coast of southern Australia, including Tasmania, and in New Zealand.

- As you watch *Penguin Island*, gather facts about Little Penguins. Create a

table to help you organise your notes. Use the following headings for columns in your table:

- Physical characteristics
- Habitat
- Diet and feeding
- Breeding
- Behavioural traits
- Predators and threats

Share the information that you have recorded with the class. Add any facts that you may have missed.

Use the table to create a brochure about Little Penguins that would appeal to adolescent and adult visitors to the Penguin Parade at Phillip Island Nature Park.

Use other print and electronic resources to locate additional information about Little Penguins and to source images to include in your brochure.

- Little Penguins have a busy annual cycle that changes with the seasons.

*Penguin Island* tells us about a year in the life of the Little Penguins of Phillip Island Nature Park.

Use this information and other information found online at <http://abc.net.au/penguinisland/> to design a calendar that explains the annual cycle of a Little Penguin.

- There are seventeen species of penguin, including Little Penguins. As a class, make a list of the seventeen species. Choose a species from the list and, working with a partner, compare Little Penguins to the other species of penguin. Present the results of your investigation using PowerPoint. Limit your report to five slides. Your report should provide a detailed description of the penguin species that you have chosen to study, images of the penguins and a summary of key similarities and differences between Little Penguins and the species you have chosen to study.



### Phillip Island

- Use your atlas to locate Phillip Island on a map of Victoria. What are its coordinates? Write a short description of Phillip Island's location within its region.
- Drawing on *Penguin Island* and internet research, make a list of land use on Phillip Island. Indicate the different types of land use on a map of the Island. Remember to use BOLTSS (Border, Orientation, Legend, Title, Scale, Source). Write a description of land use on Phillip Island. Make sure that you refer to the map in the description.
- Drawing on *Penguin Island* and internet research, explain how the use of natural and human environments have changed over time on Phillip Island.
- Use moments and statements from *Penguin Island* to discuss the way tourism is shaping life on Phillip Island.
- Use moments and statements from *Penguin Island* to discuss the way conservation is shaping life on Phillip Island.
- What recommendations would you make regarding future land use on Phillip Island?
- Should the areas protected by Phillip Island Nature Park be increased?





Adopt a persona and present a one-minute speech that states your stance on conservation practices on Phillip Island. You may select a persona from the list or invent a persona.

International tourist

Local resident who is environmentally minded

Local resident who favours urban development

Bird watcher

Commercial fisherman who sells pilchards to a cat food company

Local who enjoys fishing off the rocks along the Phillip Island coast

Former resident of the Summerland Estate

Regular holidaymaker from Melbourne

Tourist operator

Local shopkeeper

Surfer

Property developer

Park ranger

Wildlife photographer

Local farmer

Local councillor

Representative of the state government



beach that Bluey and his pals make every night generates a cool 26,000 tourist dollars each year – and that’s for every penguin.’

Why is it important that people pay to see the Penguin Parade?

- Drawing on evidence from *Penguin Island*, make a list of the strategies that are used to control public viewing of the Penguin Parade and protect the Little Penguins and their habitat.

- Make a list of the needs of tourists visiting the Penguin Parade.

Drawing on evidence from *Penguin Island*, provide evidence that the needs of tourists are accommodated.

- What strategies would you implement to satisfy the needs of the tourists and the welfare of the Little Penguins?
- Working in a small group, create an advertisement to promote the Penguin Parade at Phillip Island Nature Park. Will you design a print advertisement, an advertisement for broadcast on radio or television? Will you design an advertisement for Victorians or for interstate and international visitors?

- Working in a small group, design a souvenir range that could be sold to tourists who attend the Penguin Parade at Phillip Island Nature Park. Present your designs to the class. You will need to prepare a design brief that explains the designs and the principles that guided your designs.

- If you live in Victoria you may be able to take a school trip to Phillip Island Nature Park and view the Penguin Parade. If not, you can visit Phillip Island Nature Park online at <<http://www.penguins.org.au>>.

## Habitats

Just around the corner from the popular Penguin Parade, lots of penguins nest in wild burrows or around and under the few holiday houses left in the colony.

- How do Little Penguins find their way home?
- List the strategies that have been implemented to protect penguin habitats on land.
- Why is it difficult to protect penguin habitats at sea?

## The Penguin Parade

Over a million people visit Phillip Island Nature Park each year. The Penguin Parade is the most popular attraction with over 500,000 visitors each year.

Many of the visitors have travelled two hours from Melbourne to see the Penguin Parade; some have travelled from overseas. They want the experience to be memorable and fulfilling.

- Why are people fascinated by the Little Penguin parade at Phillip Island?
- What is eco-tourism?
- Why can the Penguin Parade at Phillip Island Nature Park be labelled as eco-tourism?
- ‘... the quick dash across the



ANDRE CHIARADIA WITH DEPTH CHARGER & STUFFED PENGUIN



LEANNE RENWICK MEASURES BABY CHICKS

Oil contamination, plastic packaging and nylon fishing line are just some of the contaminants that degrade water quality and endanger Little Penguins.

- Based on your viewing of *Penguin Island*, explain the dangers that oil and plastic pose for Little Penguins.
- How can the park rangers at Phillip Island Nature Park combat these problems?
- The housing project behind the kitchens is known as the Penguin Café. Using carefully placed artificial breeding boxes, the Little Penguins are establishing their 'love nests' despite the bright lights and the bustle of the café. The Little Penguins nest, mate, and bring up chicks while the café staff turn a blind eye to the noisy shenanigans.

Do you think the Penguin Café is a wise idea?

## Diet and feeding

Little Penguins feed on around fifteen species of fish, but are also partial to squid. They need approximately 375 grams of fish daily to maintain their weight. Prey is swallowed whole. Little Penguins may swim up to fifty kilometres a day in search of food.

- 'When fish are scarce, starvation is the colony's number one killer.'

Bluey, Sheila, Frank, Flora and the other Little Penguin parents must swim for days on end to find anything to eat, leaving their chicks hungry and alone on Penguin Island.

Can you explain why fish may be in short supply?

- Why is it good to be an overweight penguin?

## Breeding

'Now spring is coming, penguins return to the colony to meet and mate ...'

Little Penguins build their nests in May, June and July. They mate during August, September and October. Eggs are laid during September, October and November.

At night, and especially during the breeding season, the noisy din of a penguin colony can be considerable. Song and displays serve to attract mates and ward off intruders; singing duets consolidates a pair's attachment to each other.

Usually a clutch of two eggs is laid, two to four days apart. Incubation is shared by both parents and lasts about thirty-five days.

- Why must the eggs be constantly watched over by a Little Penguin parent?

Using an egg tooth, the chick takes twenty-four hours to break out of the shell. For the first two weeks, it is continually brooded by one or other parent. The sea-going parent feeds the chicks by regurgitating pre-digested food into the chick's mouth. During weeks three to eight, the parents both go to sea to feed, leaving the chicks, who from week five wait outside the burrow at night for their parents. At about eight weeks, the chick is fully fledged and ready to leave the colony. It may return once or twice during the next year but will spend most of the year at sea.

Statistics suggest that 80 per cent of little penguin chicks die in their first year.

- 'For these animals, raising chicks and staying alive, it's not easy.'

– John Evans

Drawing on evidence from *Penguin Island* and in particular the story of Sammy and Tom, explain why the mortality rate of Little Penguin chicks is so high.

- Why don't chicks like Tilda, who are born late in the season, usually survive?

## Moulting

Little Penguins moult once a year during the months of February, March and April. They return to their burrows





and fast for the fifteen to twenty days it takes to replace their old feathers with new ones. Before the moult, they must accumulate extra body fat or they may be forced to sea without waterproofing and will not survive.

- Why do Little Penguins moult?
- What are the risks associated with moulting?

## Predators

‘Foxes were introduced by homesick English settlers a century ago. It’s the rangers’ job to get rid of them.’

On land, Pacific Gulls, ravens and introduced animals such as foxes, cats and dogs are predators of the Little Penguin. In the water, its predators are sharks, leopard seals and sea lions. By keeping in groups, the Little Penguin lessens the threat from predators.

Fox predation is the greatest land-based threat to the Summerland Little Penguins. Foxes ‘thrill kill’; that is, they kill more animals than they immediately need for food. A fox may kill as many as thirty or forty penguins a night. An intensive fox control program commenced on Phillip Island in the mid 1980s and this resulted in the culling of 1000 foxes. Despite this intensive culling program, foxes are still a devastating presence.

Dogs are excluded from the Summerland Peninsula.

- Drawing on *Penguin Island*, list the strategies that are being used to control feral animals within Phillip Island Nature Park.
- What other strategies could be implemented to protect the Little Penguins from feral animals such as foxes, dogs and cats?

## A long, hot summer

The relentless heat of Australia’s hottest summer on record pushes the Little Penguins to the brink.

- Why are Little Penguins vulnerable during periods of extreme heat?
- How does human intervention ease the situation?

## Conservation

The habitat within the Phillip Island Nature Park supports significant wildlife. Over forty fauna species within Phillip Island Nature Park are listed for conservation status in Victoria. The park is an important breeding ground for many species, including Little Penguins. The Summerland Peninsula supports a breeding population of about 13,000 Little Penguin pairs. There are twenty-two plant species

within Phillip Island Nature Park that are classed as rare or threatened.

- Imagine that you have been asked to recommend how the Little Penguin colony at Phillip Island Nature Park could be better protected.

What would you propose?

Some possible management strategies are listed in the table below to help you develop your recommendation.

Reduce packaging of goods sold in the park	Increase government funding
Protection of flora	Increase signage
Research	Ban tourism
Ban rubbish within the confines of the park	Penguin breeding program
Ban domestic pets	Improve fencing
Establish more conservation zones	Establish more public viewing areas
Introduce fines	Limit recreation
Relocation of residents	Eradication of foxes
Expansion of wildlife services	Protection of fauna
Re-vegetation	Road closure
Promote tourism	What else?



MARG HEALY

- Based on your viewing of *Penguin Island*, prepare a speech that explains why wildlife conservation is important.

## Research

New technology can help scientists understand more about the lives of animals and how best to protect them.

Phillip Island Nature Park has its own research facilities. The efforts of researchers like Leanne Renwick, Dr Peter Dann and Dr Andre Chiaradia protect the colony of Little Penguins at Phillip Island Nature Park.

Many of the Little Penguins have been microchipped. The microchip, which has been inserted just under the surface of their skin, allows the staff at Phillip Island Nature Park to keep track of the Little Penguins who live in the colony. Frank and other Little Penguins head out to sea with tiny satellite tracking and computerised logging devices strapped to their backs with industrial-strength sticky tape. Then there is the weighbridge that identifies and weighs the Little Penguins as they come and go.

- Drawing on evidence from *Penguin Island*, explain why scientific research is necessary?
- Is it fair to use the Little Penguins for research purpose? Working as a class make a list of pros and cons.
- 'These are wild animals and it's a completely wild population and wild situation, so really as scientists and people working in this industry, you're really not meant to interfere in that life and death and survival process.' – Leanne Renwick

The role of the researchers and scientists is only to monitor the penguins.

Drawing on evidence from *Penguin Island*, explain what tests this principle.

- The volunteer penguin study group has been active for over forty years.

Why are volunteers important to the ongoing work of Phillip Island Nature Park and the survival of the penguin colony?

## The Penguin Hospital

Wildlife rehabilitation is defined as caring for injured, sick or orphaned native animals.

It includes providing access to veterinary assessment and treatment where required, then nursing care and support, with the goal of restoring the animals to health and releasing them into their natural habitat.

The Phillip Island Nature Park has a wildlife hospital. The hospital opened in the 1990s to care for Little Penguins and other native wildlife. Once the animals recover they are returned to the wild.

- Can you think of moments from *Penguin Island* that highlight how the Penguin Hospital rehabilitates the Little Penguins and other wildlife?
- 'No one knows penguins like Marg Healy.'

Marg Healy runs the wildlife hospital at the Phillip Island Nature Park.

What moments highlight Healy's expertise?





MARG HEALY

What moments highlight that for Healy working at the animal hospital is not just a job?

- What do the story of Foot, the Little Penguin whose foot is damaged by nylon fishing line, and Mauve, the Little Penguin who is heat-stressed, tell us about the work of the wildlife hospital?

## Summerland Estate

The Little Penguin as a species is not endangered. There are 70,000 to 80,000 Little Penguins in Victoria alone.

Humans pose the greatest threat to the existence of Little Penguins.

- Based on your viewing of *Penguin Island* and other research, make a list of the human threats to Little Penguins. Now make a list of things people can do to protect them.

‘Building your own home in Summerland used to be a dream for many young couples. You could pick up a bargain block of land with a million dollar view. Only problem – thousands of penguins lived there already.’

Summerland Peninsula was sub-divided in 1927 for residential and commercial purposes.

Since 1985 there has been an ongoing buy-back of houses on the Summerland Estate. Over time this has meant the removal of houses and road closures, allowing the land to revert to penguin habitat. Bluey and Sheila are two of the many Little Penguins who have made their nest on Summerland Estate.

- Learn more about the reclamation of the Summerland Estate at [http://en.wikipedia.org/wiki/Summerland,\\_Victoria](http://en.wikipedia.org/wiki/Summerland,_Victoria) and <http://www.abc.net.au/stateline/vic/content/2005/s1472244.htm>.
- Bluey and Sheila have a human neighbour, Elizabeth Lundahl-Hegedus.

What do we learn about Elizabeth Lundahl-Hegedus?

Why is her story an important part of *Penguin Island*?

- Do you think relocating the residents of the Summerland Estate was the right decision? How would you have reacted if you were the Wagner family? Keep in mind they had holidayed for twenty-three years on the Summerland Estate.
- Aside from taking away the houses, what else needs to be done to restore the area to its natural state?
- Write a list of reasons supporting further residential development on Phillip Island.
- Write a list of reasons against further residential development on Phillip Island.





## Behind the scenes

*Penguin Island* took eighteen months and three film crews to make. One film crew followed the penguins, another followed the human stories and a third filmed underwater.

For producer Sally Ingleton, making *Penguin Island* was a very personal experience. Like many Victorians, Ingleton has fond memories of childhood holidays on Phillip Island, and evenings spent sitting on the sand with a torch as the island's most famous residents waddled past on their daily parade. So when the ABC and National Geographic were calling for natural history ideas set in Australia, it was an idea that immediately sprung to mind.

Production stories can be viewed online at [http://abc.net.au/penguin\\_island/](http://abc.net.au/penguin_island/) or by selecting the extras menu on the *Penguin Island* DVD.

- Is the narrative of *Penguin Island* engaging?
- For more than a year, the dedicated film crews spent night after

night crawling around penguin burrows, lugging generators and lights up and down cliffs, getting attacked by angry penguins and bitten by parasites.

Working as a class, make a list of the likely challenges of making *Penguin Island*.

- Rolf Harris is the narrator of *Penguin Island*. What is the role of the narrator in this program? Why do you think the filmmakers chose Rolf Harris to narrate?
- What expectations does the opening of each episode create? How are you positioned as a viewer?
- List the settings used by the filmmakers in *Penguin Island*. How do these settings tell the

story, establish key ideas, portray key characters (both animal and human) and shape perceptions?

- What part does music play in *Penguin Island*? Do you find the filmmakers' choices effective?
- What is archival footage and when do the filmmakers use it to tell the story of *Penguin Island*?
- 'Penguin Island is visually spectacular.' Do you agree?
- Visit 360 Degree Films at <http://www.360degreefilms.com.au>.







Visit <http://abc.net.au/penguinisland/> to find out more about *Penguin Island*. The website features great resources for teachers including location maps, information on the Little Penguin, downloadable PDF on penguins of the world, research into the species, behind-the-scenes webclips of the film crew at work and a flash interactive *A Year in the Life of the Little Penguin*, which includes video and text on the Little Penguins' busy annual cycle.

## Online

### Official websites for the film

<http://www.abc.net.au/penguinisland/>

<http://www.360degreefilms.com.au/penguinisland>

### Phillip Island Nature Park

<http://www.penguins.org.au>

### Other websites about Little Penguins

<http://birdsinyourbackyards.net/species/Eudyptula-minor>

[http://en.wikipedia.org/wiki/Little\\_Penguin](http://en.wikipedia.org/wiki/Little_Penguin)

<http://www.environment.nsw.gov.au/animals/TheLittlePenguin.htm>

[http://www.penguins.org.au/index.php?option=com\\_content&view=article&id=69&Itemid=25](http://www.penguins.org.au/index.php?option=com_content&view=article&id=69&Itemid=25)

## Key creatives

### Sally Ingleton | Series producer

Sally Ingleton is an award-winning documentary producer and director. She is a partner in Australian production company 360 Degree Films. Her recent credits include *Seed Hunter*, *Tibet: Murder in the Snow*, *John Gollings: Eye for Architecture*, *Community Cop*, *2 Mums and a Dad* and *Welcome 2 My Deaf World*.

### Simon Target | Series director

Simon is an award-winning writer and director of documentary series including *King's School*, *Operatunity Oz*, *The Ship*, *The Academy*, *Fight for Life*, *Rough Justice* and *UNI*. Target has also made a number of lifestyle and travel shows including *Surfing the Menu*, *Kylie Kwong: Heart and Soul*, *Kylie Kwong: Simply Magic*, *Wicked*, *Mark Olive – The Black Olive*, *The Blue List* and *Risking it All*.

### Rolf Harris | Narrator

Rolf Harris – artist, musician, singer, television presenter – has been awarded the CBE, is a member of the Order of Australia and has won many honours for his work in the entertainment industry. He has had chart-topping hits, written best-selling books and has been voted the best entertainer ever at the Glastonbury Festival. His paintings have been exhibited in London's National Gallery and he is an

honorary member of the Royal Society of British Artists. His *Animal Hospital* television series was a five-time winner of the National Television Awards. His BBC TV art program *Rolf on Art* made television history when it gained the highest-ever ratings for an art program. His portrait of Queen Elizabeth II, to celebrate her eightieth birthday, was the subject of a BBC TV documentary *The Queen*, by Rolf.

### David Parer ACS | Director of photography

David Parer is an experienced and accomplished natural history cinematographer and filmmaker. His cinematography credits are many and include *Terrors of Australia*, *Wolves of the Sea*, *Mysteries of the Ocean Wanderers*, *The Dragons of the Galapagos*, *Islands of the Vampire Birds*, *Two Years in Galapagos*, *Nature of Australia* and *Australia Land of Parrots*.

### Hayley Smith | Natural history field producer

Hayley Smith is a UK freelance producer and director in wildlife programming. Her most recent credits include the BBC TV series *Animal Planet*, *Meerkat Manor: The Next Generation*, *Stranger Among Bears*, *Wild in Africa* and its successor *Wild on the West Coast*.

## Reference

*Penguin Island* press kit, 2010.



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