



Teacher Program Overview

Dolphin Descendants – Year Ten

Program Duration: 45 minutes

Minimum Participants: 10 students

Maximum Participants: N/A

Program Overview:

Aligning to the biological sciences strand of the Australian Curriculum for Science, this program explores the theory of evolution by investigating the history and development of Bottlenose dolphin species. Students will be introduced to Sea World’s dolphins, where they’ve come from, how they are cared for and how genetic diversity is addressed when the dolphins breed. Reproduction in wild dolphin populations will be discussed, with students considering the potential causes and consequences of reduced genetic diversity. Students will deduce that the variation in phenotypic expression of genes in a species will lead to certain individuals being selected for or against and that isolation of populations also influences the process of natural selection. Selection processes and drivers of speciation in dolphins will be investigated and students will be guided back in time to establish evidence of Bottlenose dolphin evolution. The fossil record, anatomical features and geographical distribution will be discussed to determine how millions of years of evolution have brought about such a specialised marine mammal. Finally, students will hypothesise how anthropogenic activity can alter environments to a point where no individuals in a population are equipped to cope with this change. Students will consider what human threats impact dolphins and what actions can be taken to help conserve the future of these animals.

Alignment with the Australian Curriculum:

SCIENCE

Science Understanding

Biological Sciences	Transmission of heritable characteristics from one generation to the next involves DNA and genes (ACSSU184)
	The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence (ACSSU185)

Science as a Human Endeavour

Nature and development of science	Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community (ACSHE191)
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General Capabilities:

- Literacy
- Critical and Creative Thinking
- Personal and Social Capabilities
- Ethical Understanding

Cross-Curriculum Priorities:

- Sustainability

Additional Information:



Teacher Program Schedule Dolphin Descendants – Year Ten

Time

10.30am Arrival and Park Entry

It is recommended that the group arrive before 10:30am. Entry into the park is through admissions gate number 6.

11.00am Affinity Dolphin Show

The school group will head to Dolphin Beach at 11:00am for the 11:15am *Affinity Dolphin Show*

11.35am Education Program

The school group is to remain behind in the stadium on completion of the show and a Marine Education Officer, who will deliver the *Dolphin Descendants* program, will meet them. This program is approximately 45 minutes, and will finish by 12:20pm at the latest.

12.20pm Program Conclusion

At the conclusion of this session, students will be free to enjoy the park for the rest of the day, at the teacher's discretion.



Teacher Program Overview

Ever Changing Environment – Year Ten

Program Duration: 45 minutes

Minimum Participants: 10 students

Maximum Participants: 35 students

Program Overview:

This program allows students to consolidate their understanding of climate change with a focus on how it is affecting the survival of Polar bears. *Ever Changing Environments* aligns with the Australian Curriculum for Geography and the earth and space sciences strand of Science. To understand the current state of our global climate, students will first be introduced to the science behind the naturally occurring greenhouse effect – a necessity to life on Earth. Students will postulate how humans are creating an enhanced greenhouse effect (climate crisis) through our involvement in the carbon cycle via activities such as deforestation and the burning of fossil fuels. In addition to carbon dioxide, the contribution of other greenhouse gases to climate change will be considered, as well as identifying human activities like farming that are increasing quantities of these gases in the atmosphere. Students will hypothesise the consequences of climate change on ocean temperatures and sea ice and will relate how these changes affect the survival of Polar bears. Discussions will finalise with examples of management strategies that aim to lessen human induced climate change and students will consider the social, economic and environmental benefits and costs of these options. Lastly, students will be asked to pledge actions they can take to reduce their ecological footprint.

Alignment with the Australian Curriculum:

SCIENCE

Science Understanding

Earth and Space Sciences	Global systems, including the carbon cycle, rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere (ACSSU189)
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Science as a Human Endeavour

Nature and Development of Science	Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community (ACSHE191)
Use and Influence of Science	People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people’s lives, including generating new career opportunities (ACSHE194)
	Values and needs of contemporary society can influence the focus of scientific research (ACSHE230)

GEOGRAPHY

Environmental Change and Management	Human-induced environmental changes that challenge sustainability (ACHGK070)
	Environmental world views of people and their implications for environmental management (ACHGK071)
	<p>Select ONE of the following types of environment as the context for study: land (e.g. forests, deserts, grasslands, farmland), inland water, coast, marine or urban.</p> <ul style="list-style-type: none"> • The application of systems thinking to understanding the causes and likely consequences of the environmental change being investigated (ACHGK073)

Teacher Program Overview

Ever Changing Environment – Year Ten

	<ul style="list-style-type: none"> The application of geographical concepts and methods to the management of the environmental change being investigated (ACHGK074) The application of environmental economic and social criteria in evaluating management responses to the change (ACHGK075) 	
Geographical Inquiry and Skills		
Observing, Questioning and Planning	Develop geographically significant questions and plan an inquiry that identifies and applies appropriate geographical methodologies and concepts (ACHGS072)	
Reflecting and Responding	Reflect on and evaluate findings of an inquiry to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic, political and social considerations; and explain the predicted outcomes and consequences of their proposal (ACHGS080)	
General Capabilities: <ul style="list-style-type: none"> Literacy Critical and Creative Thinking Personal and Social Capabilities Ethical Understanding 		Cross-Curriculum Priorities: <ul style="list-style-type: none"> Sustainability



Teacher Program Schedule Ever Changing Environment – Year Ten

Time

9.15am Arrival

The school will arrive promptly at 9:15am and will be met by a Marine Education Officer on the lawn next to the flagpoles out the front of Sea World.

9.20am Park Entry

The Marine Education Officer will lead the school group through the admissions gate to Polar Bear Shores for the education program.

9.30am Education Program

This program is approximately 45 minutes, and will finish by 10:30am at the latest. Please note: selection of this program will prevent the school group from seeing the morning *Fish Detectives Sea Lion Show*.

10.30am Program Conclusion

At the conclusion of this session, students will be free to enjoy the park for the rest of the day, at the teacher's discretion.

Teacher Program Overview

Marine Investigators – Year Ten

Program Duration: 45 minute lecture + 1hr snorkel program (inclusive of 20 minutes in-water time)

Minimum Participants: 8 students, 1 teacher **Maximum Participants:** 44 students, 4 teachers

Program Overview:

During this program students will consider how evolution has produced the incredible biodiversity that exists within a reef ecosystem. *Marine Investigators* aligns with the biological sciences strand of Australian Curriculum for Science, particularly addressing Science Inquiry Skills. A 45-minute session at Shark Bay’s underwater viewing gallery will allow students to identify the various physical and behavioural adaptations exhibited by reef animals given the particular challenges of the reef environment. Through the Tropical Reef snorkelling program, which is inclusive of 20 minutes in the water, students will practice basic snorkelling skills in a safe, controlled environment. This program can be used to collect data for a class project or assessment task where students are required to formulate questions for investigation; collect and record data on provided underwater slates; draw conclusions consistent with recorded evidence; and evaluate the quality and usefulness of these conclusions.

Alignment with the Australian Curriculum:

SCIENCE

Science Understanding

Biological Sciences	The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence (ACSSU185)
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Science as a Human Endeavour

Nature and Development of Science	Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community (ACSHE191)
Use and Influence of Science	People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people’s lives, including generating new career opportunities (ACSHE194)

Science Inquiry Skills

Questioning and Predicting	Formulate questions or hypotheses that can be investigated scientifically (AC SIS198)
Planning and Conducting	Plan, select and use appropriate investigation types, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods (AC SIS199)
	Select and use appropriate equipment, including digital technologies, to collect and record data systematically and accurately (AC SIS200)
Processing and Analysing Data and Information	Use knowledge of scientific concepts to draw conclusions that are consistent with evidence (AC SIS204)
Evaluating	Evaluate conclusions, including identifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data (AC SIS205)



Teacher Program Overview

Marine Investigators – Year Ten

General Capabilities:

- Literacy
- Critical and Creative Thinking
- Personal and Social Capabilities
- Ethical Understanding

Cross-Curriculum Priorities:

- Sustainability

Additional Information:

- An additional fee per person will be charged for participation in the Tropical Reef Snorkel program.
- To be eligible for the Tropical Reef Snorkel program, students, school staff and any accompanying adults must meet the program's participation criteria and must each have a signed copy (by students' guardians where necessary) of the program waiver form to deliver to the Marine Education Officer upon entry into Sea World.
- Tropical Reef Snorkel program participants must bring swimmers and a towel.
- Cameras are permitted in the Tropical Reef Lagoon but camera extension poles are not – please note, Sea World and its staff are not responsible for the security and/or well-being of any participant's personal belongings.



Teacher Program Schedule

Marine Investigators – Year Ten

Time

8.50am Arrival

The school will arrive promptly at 8:50am and will be met by a Marine Education Officer on the lawn next to the flagpoles out the front of Sea World.

9.00am Park Entry

The Marine Education Officer will lead the school group through the admissions gate to Shark Bay for the education program.

9.15am Education Program

A 45-minute lesson will serve to provide educational content and technical instruction for the snorkelling program.

10.15am Snorkelling program/s

The first group of up to 12 snorkelling participants (inclusive of teachers) are delivered to the Shark Bay briefing room for commencement of the Tropical Reef Snorkel program.

This component of *Marine Investigators* runs for 50 minutes to an hour and involves:

- 15 minutes for a safety briefing and time to get changed;
- 20 minute snorkel
- 15 minutes to get changed back into dry clothes

If there are over 12 participants, collection times for subsequent programs will be at half hourly intervals:

10:15 am

10:45 am

11:15 am

11:45am

Teachers should be dispersed between groups as necessary. The collection point for subsequent groups will be under the umbrella at the entry to the Tropical Reef Lagoon at Shark Bay.

11.15am Program Conclusion (approximate)

If there is only one snorkel program, the session will conclude at approximately 11:15am and students will be free to enjoy the park for the rest of the day, at the teacher's discretion. In the instance of multiple snorkelling programs, the final group will conclude approximately 1 hour after their snorkel collection time.



Teacher Program Overview and Schedule

How To Train A Seal

Program Duration: 45 minutes

Minimum Participants: 10 students

Maximum Participants: N/A

Program Overview:

This program enables students to gain a firsthand understanding of how Sea World’s animals are cared for. Based at Seal Theatre, *How to Train a Seal* aligns to the content of TAFE courses including Certificate II and III in Animal Studies, Certificate III in Captive Animals and Certificate III in Companion Animal Services. This program presents an in depth look at the care and management of seals and sea lions which will reinforce students’ learning and help them understand the level of care required by these animals. Students will be provided with detailed information relevant to their course, covering topics such as conditioning, enrichment, feeding, hygiene, health checks and housing of animals in human care. Students will discover what it is like to work in the animal care industry and what is required to be part of an effective animal handling team. If available, a marine mammal trainer will deliver a short talk about training and caring for the seals and sea lions housed at Sea World with a potential seal training demonstration included. To conclude, students will consider the contribution of human care facilities like Sea World to the understanding, protection and conservation of wild animal populations.

Alignment with TAFE Program:

CERTIFICATE II IN ANIMAL STUDIES

Relevant Course Units

ACMSPE310A	Provide basic care of mammals
ACMGAS202A	Participate in workplace communications
ACMGAS203A	Complete animal care hygiene routines
ACMGAS204A	Feed and water animals
ACMGAS205A	Assist in health care of animals
ACMGAS201A	Work in the animal care industry

CERTIFICATE III IN ANIMAL STUDIES

Relevant Course Units

ACMGAS303A	Plan for and provide nutritional requirements for animals
ACMINF301A	Comply with infection control policies and procedures in animal work
ACMGAS301A	Maintain and monitor animal health and wellbeing
ACMGAS203A	Complete animal care hygiene routines
ACMGAS302A	Provide enrichment for animals
ACMGAS204A	Feed and water animals
ACMGAS306A	Assist with conditioning animals
ACMGAS205A	Assist in health care of animals

CERTIFICATE III IN CAPTIVE ANIMALS

Relevant Course Units

ACMCAN304A	Prepare and maintain animal housing
ACMGAS301A	Maintain and monitor animal health and wellbeing
ACMGAS303A	Plan for and provide nutritional requirements for animals

Teacher Program Overview and Schedule

How To Train A Seal

ACMGAS302A	Provide enrichment for animals
ACMCAN302A	Prepare and present information to the public
ACMGAS306A	Assist with conditioning animals
CERTIFICATE III IN COMPANION ANIMAL SERVICES	
Relevant Course Units	
ACMGAS301A	Maintain and monitor animal health and wellbeing
ACMGAS203A	Complete animal care hygiene routines
ACMINF301A	Comply with infection control policies and procedures in animal work
ACMCAS301A	Work effectively in the companion animal industry
ACMGAS302A	Provide enrichment for animals
ACMGAS303A	Plan for and provide nutritional requirements for animals
ACMGAS306A	Assist with conditioning animals

Program Schedule

Time

9.45am Arrival and Park Entry

It is recommended that the group arrive before 9:45am. Entry into the park is through admissions gate number 6.

10.00am Fish Detectives Sea Lion Show

The school group should head to Sea Lion Theatre by 10:00am for the 10:15am *Fish Detectives Sea Lion Show*

11.35am Education Program

The school group is to remain behind in the stadium on completion of the show and a Marine Education Officer, who will deliver the *How to Train a Seal* program, will meet them. This program is approximately 45 minutes, and will finish by 11:20am at the latest. Please note: selection of this program will prevent the school group from seeing the morning *Affinity Dolphin Show*.

11.20pm Program Conclusion

At the conclusion of this session, students will be free to enjoy the park for the rest of the day, at the teacher's discretion.



Teacher Program Overview and Schedule

Environmental Issues

Year Level: All

Program Duration: 45 minutes

Min. Participants: 10 students

Max. Participants: 100 students

Program Overview:

Set in the underwater viewing gallery of Shark Bay, this program introduces students to the numerous ways humans are interconnected to the oceans and their inhabitants. Students of all year levels will engage in inquiry-based learning activities to discover how fishing activity, shark nets, marine debris and pollution are all contributing to loss of biodiversity and what actions can be taken personally and collectively to live sustainably and reduce our ecological footprint.

Additional Information:

**Program is not curriculum aligned*

Program Schedule

Time	
9.15am	Arrival
	Meet Marine Education Officer on lawn next to flagpoles out front of Sea World
9.20am	Park entry and transfer to Shark Bay
9.30am	Education Program
	Please note: selection of this program will prevent school from seeing morning Fish Detectives Sea Lion Show
10.30am	Program Conclusion
	At the conclusion of this session, students will be free to enjoy the park for the rest of the day, at the teacher's digression.



Teacher Program Overview and Schedule

Getting Smart About Sharks

Year Level: All

Program Duration: 45 minutes

Min. Participants: 10 students

Max. Participants: 100 students

Program Overview:

During this interactive program, students of all ages will learn about the amazing biology and ecology of sharks. Students will discover the variety of marine habitats where sharks live, what roles they occupy in their habitats and how they are equipped to survive in their environment. Specific adaptations covered will address how sharks move, hunt, protect themselves, rest and breathe. Students will consider how some human activities are threatening the survival of sharks and will discuss actions that can be taken individually and globally to help with conservation of these animals.

Additional Information:

**Program is not curriculum aligned*

Program Schedule

Time	
9.15am	Arrival
	Meet Marine Education Officer on lawn next to flagpoles out front of Sea World
9.20am	Park entry and transfer to Shark Bay
9.30am	Education Program
	Please note: selection of this program will prevent school from seeing morning Fish Detectives Sea Lion Show
10.30am	Program Conclusion
	At the conclusion of this session, students will be free to enjoy the park for the rest of the day, at the teacher's digression.



Teacher Program Overview and Schedule In Depth With Dolphins

Year Level: All

Program Duration: 45 minutes

Min. Participants: 10 students

Max. Participants: n/a

Program Overview:

During this interactive program, students of all ages will learn about the amazing biology and ecology of sharks. Students will discover the variety of marine habitats where sharks live, what roles they occupy in their habitats and how they are equipped to survive in their environment. Specific adaptations covered will address how sharks move, hunt, protect themselves, rest and breathe. Students will consider how some human activities are threatening the survival of sharks and will discuss actions that can be taken individually and globally to help with conservation of these animals.

Additional Information:

**Program is not curriculum aligned*

Program Schedule

Time	
10.30am	Arrival Advised latest entry time to park
11.00am	Affinity Dolphin Show Group to arrive at Dolphin Beach for 11:15am Affinity Dolphin Show
11.35am	Education Program Please note: selection of this program will prevent school from seeing morning Fish Detectives Sea Lion Show
12.20pm	Program Conclusion At the conclusion of this session, students will be free to enjoy the park for the rest of the day, at the teacher's digression.



Teacher Program Overview and Schedule

Paws, Claws and Roars

Year Level: All

Program Duration: 45 minutes

Min. Participants: 10 students

Max. Participants: 35 students

Program Overview:

This interactive program provides a broad overview of Polar bear biology and ecology for students of all ages. Students will learn where Polar Bears live, what role they occupy in their habitat and how they are equipped to survive in their environment. Specific adaptations covered will address how Polar bears move, hunt, protect themselves and maintain body temperature. Students will consider how some human activities are threatening Polar bears' survival and will discuss actions that can be taken individually and globally to help with conservation of this species.

Additional Information:

**Program is not curriculum aligned*

Program Schedule

Time	
9.15am	Arrival
	Meet Marine Education Officer on lawn next to flagpoles out front of Sea World
9.20am	Park entry and transfer to Polar Bear Shores
9.30am	Education Program
	Please note: selection of this program will prevent school from seeing morning Fish Detectives Sea Lion Show
10.30am	Program Conclusion
	At the conclusion of this session, students will be free to enjoy the park for the rest of the day, at the teacher's digression.



Education Program Schedule

The Real Deal With Seals

Year Level: All

Program Duration: 45 minutes

Min. Participants: 10 students

Max. Participants: n/a

Program Overview:

During this interactive program, students of all ages will learn about the fascinating biology and ecology of seals. Students will discover the variety of marine habitats where seals live, what roles they occupy in their habitats and how they are equipped to survive in their environment. Specific adaptations covered will address how seals move, hunt, protect themselves, rest, breathe and maintain body temperature. When available, a marine mammal trainer will deliver a short talk about training and animal care usually involving a brief training session with a seal. Students will consider how some human activities are threatening the survival of seals and will discuss actions that can be taken individually and globally to help with conservation of these animals.

Additional Information:

**Program is not curriculum aligned*

Program Schedule

Time	
9.45am	Arrival Advised latest entry time to park
10.00am	<i>Fish Detectives Sea Lion Show</i> Group to arrive at the Sea Lion Theatre for 10:15am <i>Fish Detectives Sea Lion Show</i>
10.35am	Education Program Please note: selection of this program will prevent school from seeing morning <i>Affinity Dolphin Show</i>
11.20pm	Program Conclusion At the conclusion of this session, students will be free to enjoy the park for the rest of the day, at the teacher's digression.