



Marine Investigators – Year Ten Program Overview & Mapping

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

Minimum Participants: 8 students, 1 teacher

Maximum Participants: 48 (incl. at least 1 teacher)

Location: Shark Bay

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.

Additional Information:

- An additional fee per person (including school staff) 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.
- Underwater cameras are permitted and recommended for data collection in the Tropical Reef Lagoon but camera extension poles are not permitted – please note, Sea World and its staff are not responsible for the security and/or well-being of any participant's personal belongings.

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Program Schedule:

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 session. Please note: selection of this program will prevent the school group from seeing the morning *Seal Guardians Presentation* and, potentially, the morning *Affinity Dolphin Presentation* (depending on snorkelling participant numbers).

10:05am Snorkelling Session/s

The first group of up to 12 snorkelling participants (inclusive of teachers) go to the Shark Bay tour meeting area for commencement of the Tropical Reef Snorkel session.

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 sessions will be at half hourly intervals:

10:05am for 10:15am snorkel

10:35am for 10:45am snorkel

11:05am for 11:15am snorkel

11:35am for 11:45am snorkel

Teachers should be dispersed between groups as necessary. The collection point for subsequent groups will be the Shark Bay tour meeting area.

11:15am Program Conclusion (approximate)

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

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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)

General Capabilities:

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

Cross-Curriculum Priorities:

Sustainability