



Dolphin Descendants – Year Ten Program Overview & Schedule

Program Duration: 45 minutes

Minimum Participants: 10 students

Maximum Participants: n/a

Location: Dolphin Beach

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.

Program Schedule:

Time

10:30am Arrival and Park Entry

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

11:00am Affinity Dolphin Presentation

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

11:35am Education Program

The school group is to remain behind in the stadium on completion of the *Affinity Dolphin Presentation* 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 12:25pm at the latest.

12:25pm Program Conclusion

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

Dolphin Descendants – Year Ten Program Mapping

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)
-----------------------------------	---

General Capabilities:

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

Cross-Curriculum Priorities:

- Sustainability