



Bear Essentials – Year Eight Program Overview & Schedule

Program Duration: 45 minutes

Minimum Participants: 10 students

Maximum Participants: 35 students

Location: Polar Bear Shores

Program Overview:

During this program, students will investigate the specialised body systems Polar bears are equipped with to survive in the harsh environment of the Arctic Circle. This program aligns with the Australian Curriculum primarily through the Biological Sciences strand of Science and secondarily through the Physical Sciences strand. Polar bear anatomy and biology will be examined and compared with humans in relation to the specialised functioning of organs in their digestive, sensory and reproductive systems. The overall role each body system plays in the survival of Polar bears will be considered with reference to how these systems are challenged by the rapidly changing environment the bears occupy. Energy storage, transfer and transformation will be a secondary theme within this program, referred to in the contexts of chemical energy stored by the bears in preparation for famine and the energy transfers and transformations causal of altering the bears' environment through climate change. Given the conservation status of Polar bears, this program will conclude with a discussion about how humans are contributing to climate change and students will identify solutions to conserve energy and minimise impacts at an individual level and on a global scale.

Program Schedule:

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 *Seal Guardians Presentation*.

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 discretion of school staff.

Bear Essentials – Year Eight Program Mapping

Alignment with the Australian Curriculum:

SCIENCE

Science Understanding

Biological Sciences	Multi-cellular organisms contain systems of organs carrying out specialised functions that enable them to survive and reproduce (ACSSU150)
Physical Sciences	Energy appears in different forms, including movement (kinetic energy), heat and potential energy, and energy transformations and transfers cause change within systems (ACSSU155)

Science as a Human Endeavour

Use and Influence of Science	Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations (ACSHE135)
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General Capabilities:

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

Cross-Curriculum Priorities:

- Sustainability