Tracking Biodiversity – Eastern Barred-Bandicoot Spotlight

Join our rangers for an island walk by torchlight to meet the Eastern Barred-Bandicoot, a critically endangered marsupial now inhabiting Churchill Island. Discover first-hand, an incredible conservation story as Nature Parks researchers establish a wild population of a threatened species. During this field-based activity, students investigate how biodiversity is measured and monitored in the context of a threatened species. They generate primary data (bandicoot sightings, dig sites), organise that data and use it to evaluate Nature Parks biodiversity management strategy for the Eastern Barred-Bandicoot.

Learning Objectives

- Types of biodiversity: genetic, species and ecosystem diversity
- Conservation categories: genetic diversity, populations and species
- Threats to biodiversity: habitat modification and destruction, competition from exotic species
- Assessment of threat in determining conservation categories
- Conservation strategies

Level: VCE, Tertiary, Environmental Science
Location: Churchill Island Heritage Farm
Duration: 2 hours
Ranger to student ratio: 1:25
Price: $26.00 per student
Minimum Cost: $390.00
Equipment: Warm clothing, closed shoes
Note: Evening activity, please phone our Education Administration Officer for more information about this experience

We welcome your enquiry.
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More information visit: https://www.penguins.org.au/conservation/education/

VCE Environmental Science Study Design – 2022-2026
Unit 3 – How can biodiversity and development be sustained?

Area of Study 1 - Why is maintaining biodiversity worth a sustained effort?

Australia is one of seventeen countries described as being 'mega diverse' in terms of its terrestrial and marine life. While only accounting for 10 per cent of the global surface, this group of seventeen countries contains more than 70 per cent of the biodiversity on the planet. In this area of study students use biodiversity as a lens through which to investigate the management of a single Earth system – the biosphere. They examine the categories of biodiversity, the role of biodiversity in sustaining ecosystems, the provision of ecosystem services for human well-being and the strategies employed to counteract threats, both natural and human-induced, to maintain biodiversity in the short-, medium- and long-term.

The selection of learning contexts should allow students to develop practical techniques and undertake fieldwork and other practical activities to investigate how biodiversity is measured and monitored in the context of a selected threatened species of interest. Students generate primary data, and organise and present this data, to evaluate whether efforts to ensure the long-term survival of the selected species are justified.

Outcome 1

On completion of this unit the student should be able to explain the importance of Earth's biodiversity and how it has changed over time, analyse the threats to biodiversity, and evaluate management strategies to maintain biodiversity in the context of one selected threatened endemic species.

Key knowledge

Importance of biodiversity

• the definition and categories of biodiversity: genetic, species and ecosystem

•the importance of genetic diversity within a species or population experiencing environmental change

Assessing Changes and Threats in Biodiversity

Protection and restoration of biodiversity: translocation of animals; captive breeding and reintroduction programs; gene banks for the collection of specimens and genetic material