

Melbourne Wildlife Sanctuary Education Experiences

Discovering Ecology



For the past 40 years we have been restoring the Melbourne Wildlife Sanctuary to the River Red Gum woodlands and wetlands that existed in this region of Melbourne prior to European settlement. This provides an ideal setting for secondary students to develop skills in science based topics such as **ecology, sustainability, biodiversity, conservation and habitat restoration.**

Students experience the bush through an Ecologist's eye. They can take part in a practical survey of wetlands and woodlands and study the bush to see how plants have evolved to survive in Australia's harsh conditions.

Thick stands of wetland plants protect quiet pools of water teeming with life. Students discover methods for measuring biotic and abiotic factors, focusing on assessing wetlands by measuring the abundance and species richness of aquatic macroinvertebrates.

The woodlands are teeming with invertebrates; hiding under fallen logs, dangling from leaves and branches, on and under the soil. Students explore the different niches that make up a terrestrial ecosystem and discover different methods for quantifying invertebrate abundance and richness in these habitats.

Our Learning Centre has quality stereo microscopes that allow closer examination of the invertebrates that students have encountered in both terrestrial and aquatic ecosystems.

Our expert presenters cover many facets of ecology during a wetland and woodland wander. Including the evolutionary history of Australia; plant adaptations; symbiotic relationships; and the history of fire in the Australian landscape.

During the walk students are given the opportunity to examine evidence of indigenous and European settlers' use of the land.



Suitable for Levels 5 – VCE

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An Engaging Experience

Discovering Ecology can be adapted to meet the requirements of a variety of levels. From getting a bit of hands on experience exploring simple data collection techniques to actually undertaking a survey and collecting a data set for later analysis at school. We can provide teachers and students with a Discovering Ecology booklet including student questions on topics and concepts that will be covered during the experience and data collection sheets.

A standard two hour program for Levels 5 & 6 consists of four 20-25 minute experiences.

1. Wetland Survey
 - 🐾 As a group measure water pH, temperature and turbidity
 - 🐾 Individual students collect a sample of macroinvertebrates using dip nets
 - 🐾 Identify and quantify macroinvertebrates
2. Terrestrial Survey
 - 🐾 Examine different niches for terrestrial invertebrates
 - 🐾 Students learn how to make and use a Berlese Funnel to survey terrestrial invertebrates
 - 🐾 Students then mark out a quadrat and undertake a survey of the invertebrates
 - 🐾 Identify and quantify invertebrates
3. Close Encounters II
 - 🐾 Our stereo microscopes allow individual investigation of aquatic and terrestrial invertebrates
4. Wetland and woodland wander
 - 🐾 A walk that covers a variety of ecological concepts and shows examples of ecology in action

A standard two hour program for VCE Ecology consists of

1. Introduction
 - 🐾 Evolutionary history of Australia
 - 🐾 History of the Melbourne Wildlife Sanctuary
2. Ecology Tour
 - 🐾 Students are given a worksheet that can be completed at school with questions addressing themes such as
 - Ecosystems;
 - Species Extinction; and
 - Restoration of Habitat
 - 🐾 During the tour our presenters will cover the topics in this worksheet. Wherever possible presenters will point out examples, encouraging student dialogue and questions.

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Program Extension

Engage your students further by extending the education experience to include one or more extra activities. You could come for the day and include a morning and afternoon component.

e.g. VCE Ecology can include an afternoon component where students undertake a survey. Components that can be covered include

1. Students learn how to use a dichotomous key to identify plant species
2. Students learn about the importance of methodology in undertaking ecological surveys and what is involved in designing methodology
3. Students are given an area for the class group to randomly survey for invertebrates
 - 🐛 Calculate abundance of invertebrates
 - 🐛 Calculate species richness of invertebrates
 - 🐛 Examine which niches particular organisms occupy

Contact our bookings office on 9479 1206 for details regarding extending or tailoring programs.