**Serendip Sanctuary**

**Education Program**

Ranger-led activities

# Program logistics

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| Coins outline | Cost | $8.50 per student. Supervising teachers attend for free. An invoice will be sent via email after your visit to the park. |
| Deciduous tree outline | **Location** | Serendip Sanctuary  100 Windermere Rd, Lara VIC 3212 |
| Graduation cap outline | **Year levels** | Foundation – Year 12 |
| Books outline | **Learning areas** | Science  Geography  VCE Environmental Science |
| Wheelchair outline | **Accessibility** | Please inform education staff at the time of booking if students have specific access or other requirements.  A social script is available for participants on the autism spectrum. Using plain text and images, the social script describes what children may see and experience during their visit to Serendip Sanctuary. View this resource here - <https://www.parks.vic.gov.au/get-into-nature/all-abilities-access/autism-friendly-visits> |
| Email outline | **Contact** | To book or discuss your school needs, please email [SerendipEducationCentre@parks.vic.gov.au](mailto:SerendipEducationCentre@parks.vic.gov.au) or contact the Education Officer on 8427 3486 |

### Additional resources to support your learning

Visit <http://www.parks.vic.gov.au/get-into-nature/learning-in-nature/plan-your-learning>

### On the day

* Ensure students bring sunscreen, a drink bottle and pens/clipboard.
* Students must wear suitable clothing and sturdy covered footwear (no thongs or crocs).
* Local weather may vary from regional forecasts. Check the local weather and dress accordingly.
* The healthiest food for wild animals occurs in nature – do not feed or encourage animals to take any human food.
* Leave as little trace of your visit as possible – take all rubbish out of the park and keep to existing tracks.
* Plants, animals and other natural features, objects, and cultural sites in the park are protected by law and must not be disturbed or removed.

# About the park Serendip Sanctuary

Serendip Sanctuary is a wildlife oasis close to Melbourne where you can see kangaroos, wallabies, and a huge variety of birds including emus. Close to Geelong, the sanctuary showcases the open grassy woodlands and wetlands of the volcanic Western Plains, making it an ideal spot to see birdlife and learn about wetlands ecology. The bird hides help visitors to see some of the 200 bird species that breed at, or visit, Serendip Sanctuary.

Curriculum-aligned education sessions at Serendip offer students an excellent opportunity to learn about the many habitats of the Western Volcanic Plains and how the park plays an important role in safeguarding threatened species.

# Primary school programs

## Minibeast discovery

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| Graduation cap outline | Levels  F-2 | Students collect aquatic invertebrates at one of Serendip’s wetlands, explore the features of these organisms and name them by matching them to pictures. They learn about the needs of these living things and how changes in the environment and human use of water can affect them.  **Learning outcomes:**  VCSSU042, VCSSU047, VCSIS053  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence A green sign with white text and a tree and birds  Description automatically generated with low confidence |
| Books outline | Learning area  Science |
| Marker outline | Location  Ponding site, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

## Creature features

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| Graduation cap outline | Levels  3-4 | Students collect aquatic invertebrates at one of Serendip’s wetlands and investigate the observable features of these organisms. They learn about relationships between invertebrates and other animals, and the aquatic conditions important for survival. Students make predictions about the health of the wetland and compare their findings with these predictions. They discuss how changes to wetland health can impact organisms and what they can do to help.  **Learning outcomes:**  VCSSU057, VCSSU058, VCSIS070  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence A green sign with white text and a tree and birds  Description automatically generated with low confidence |
| Books outline | Learning area  Science |
| Marker outline | Location  Ponding site, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

## Minibeast adaptations

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| Graduation cap outline | Levels  5-6 | Students collect aquatic invertebrates at one of Serendip’s wetlands and investigate the structural features and adaptations of these organisms. They learn how the growth and survival of these organisms are affected by the physical aquatic conditions of the wetlands. Students make predictions about the health of the wetland and compare their findings with these predictions. They discuss how changes to wetland health can impact organisms and what they can do to help.  **Learning outcomes:**  VCSSU074, VCSSU075, VCSIS086  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence A green sign with white text and a tree and birds  Description automatically generated with low confidence |
| Books outline | Learning area  Science |
| Marker outline | Location  Ponding site, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

## Water quality testing

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| Graduation cap outline | Levels  5-6 | Students assess the health of one of Serendip’s wetlands by testing the water for turbidity, pH, electronic conductivity and temperature. They predict and describe the effect of changes to the aquatic environment on the survival of living things. By applying the scientific method, students pose questions, record and organise data, analyse patterns and relationships, and learn that testing the water is essential for maintaining or improving water quality.  **Learning outcomes:**  VCSSU075, VCSIS082, VCSIS083, VCSIS085, VCSIS086  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence |
| Books outline | Learning area  Science |
| Marker outline | Location  Ponding site, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

# Secondary school programs

## Assessing grassy woodland habitat

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| Graduation cap outline | Levels  7-8 | Students learn about the impacts humans have had on grasslands and species like the Eastern Barred Bandicoot, including strategies to maintain remaining grassland ecosystems. They conduct a habitat quality assessment of a grassy woodland ecosystem and assess if it is a suitable area for an Eastern Barred Bandicoot release.  **Learning outcomes:**  VCSSU093, VCSIS108, VCSIS111  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence A green sign with white text and a tree and birds  Description automatically generated with low confidence |
| Books outline | Learning area  Science |
| Marker outline | Location  Picnic area, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

## Exploring wetland health

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| Graduation cap outline | Levels  7-8 | Students assess the health of one of Serendip’s wetlands by testing the water for turbidity, pH, electronic conductivity and temperature. They investigate how water as a resource cycles through the environment and is important for the survival of living things. Students plan and conduct their fieldwork investigation, collecting data to evaluate the health of the wetlands. They learn that testing the water is essential for maintaining aquatic ecosystems that have been impacted by human activities.  **Learning outcomes:**  VCSSU090, VCSSU101, VCSIS108, VCSIS111  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence |
| Books outline | Learning area  Science |
| Marker outline | Location  Ponding site, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

## Climate connections

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| Graduation cap outline | Levels  8-10 | Students investigate the interconnections between people and nature and contribute to the study of climate change by becoming citizen scientists for the day. Using the concept of phenology, or the study of cyclic and seasonal natural phenomena, students walk the Climate Watch trail and make observations about the life stages of various local flora and fauna, their behaviours and where they are found in the park. Students also investigate the adaptations of the plants and animals they find. After completing the walk, students reflect on the importance of collecting data at different times of the year to monitor the impacts of climate change on local ecosystems.  **Learning outcomes:**  VCSSU090, VCSSU091, VCSSU121, VCSSU129, VCGGK147  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence A green sign with white text and a tree and birds  Description automatically generated with low confidence |
| Books outline | Learning area  Science, Geography |
| Marker outline | Location  Picnic area, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

## Assessing the health and function of grassy woodlands

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| Graduation cap outline | Levels  9-10 | Students learn about the impacts of environmental change on biodiversity and the health and function of grasslands. They explore the interactions within ecosystems that allow animals like the Eastern Barred Bandicoot to survive there. Students then conduct a habitat quality assessment of a grassy woodland ecosystem and assess if it is a suitable area for an Eastern Barred Bandicoot release. They are encouraged to think about the impacts of climate change and other human activity on ecosystems within Victoria.  **Learning outcomes:**  VCSSU121, VCSSU128, VCSIS135  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence A green sign with white text and a tree and birds  Description automatically generated with low confidence |
| Books outline | Learning area  Science |
| Marker outline | Location  Picnic area, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

## Waterwatch investigation

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| Graduation cap outline | Levels  9-10 | Students assess the health of one of Serendip’s wetlands by testing the water for turbidity, pH, electronic conductivity and temperature. They investigate how the quality of water and nutrient cycling can be influenced by human activity. Students plan and conduct their fieldwork investigation, collecting data to evaluate the health of the wetlands. They learn that testing the water is essential for maintaining aquatic ecosystems that have been impacted by human activities.  **Learning outcomes:**  VCSSU121, VCSSU128, VCSIS135  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence |
| Books outline | Learning area  Science |
| Marker outline | Location  Ponding site, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

## Protecting biodiversity in grassy woodland habitat

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| Graduation cap outline | Levels  VCE Environmental Science | Students learn how the environment within Serendip Sanctuary has changed over time and explore the diversity of species within grassy woodland habitats of the Western Volcanic Plains. They learn how scientific practices such as land management contribute to the protection of biodiversity. Students plan and conduct a habitat quality assessment, using a range of scientific instruments and materials, to determine the quality of grassy woodland habitat within the sanctuary. They evaluate the suitability of the site for Eastern Barred Bandicoot release and identify ways to protect the habitat and other associated species.  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence A green sign with white text and a tree and birds  Description automatically generated with low confidence |
| Books outline | Learning area  Unit 1 (AOS2/3) or  Unit 3 (AOS1) |
| Marker outline | Location  Picnic area, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |

## Human impacts on local wetland ecosystems

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| Graduation cap outline | Levels  VCE Environmental Science | Students assess the health of one of Serendip’s wetlands by testing the water for turbidity, pH, electronic conductivity and temperature.  They investigate how the quality of water, nutrient cycling and interactions between abiotic and biotic components of ecosystems can be influenced by human activity. Students conduct their fieldwork investigation, collecting data to evaluate the health of the wetlands. They determine the impact of pollutants on Earth’s systems and consider a range of options for managing the impacts of water disturbances. They learn that testing the water is essential for monitoring ecosystem disturbances and health, which has flow on effects for the biosphere and hydrosphere.  **Links to UN Sustainable Development Goals:**  A red sign with a book and a pencil  Description automatically generated with low confidence A picture containing text, logo, font, graphics  Description automatically generated A picture containing text, design, font, screenshot  Description automatically generated A picture containing text, logo, graphics, mammal  Description automatically generated A blue sign with white text and a fish and waves  Description automatically generated with low confidence |
| Books outline | Learning area  Unit 1 (AOS1/3) or Unit 2 (AOS1) |
| Marker outline | Location  Ponding site, Serendip Sanctuary |
| Alarm clock outline | Time  60 minutes |