



*Toohey Forest*  
**Environmental  
Education  
Centre**

### Learning Goals:

- **Recognise** water quality considers physical, chemical and biological indicators which interact
- **Analyse and evaluate** the health of two local freshwater ecosystems using abiotic and biotic data collected from the field
- **Contribute** collaboratively to groups

Inspiring science beyond the classroom

Time	Activity
9.30–9.40 (10 min)	<b>Introduction to program and facilities</b>
9.40–10.00 (20 min)	<b>Classroom Presentation</b> <ul style="list-style-type: none"> <li>• Importance of water quality</li> <li>• Monitoring strategies</li> <li>• Physical, chemical and biological indicators</li> </ul>
10.00–11.00 (1 hour)	<b>Waterway Sampling (at Toohey Forest pond)</b> Use sampling techniques (nets, horiba data logger and chemical testing strips) to investigate the physical, chemical and biological condition of the Toohey Forest pond.
11.00-11.30 (30 min)	<b>First Break</b>
11.30–12.20 (50 mins)	<b>Microscopes: Macro-invertebrate Identification (Understorey Classroom)</b> Identify aquatic organisms and determine their sensitivity rating. Compare the aquatic organisms from Toohey Forest pond (Mimosa Creek) against a sample collected prior from Stable Swamp Creek, which belongs to a different water catchment.
12.20-1.05 (45 mins)	<b>Food Chains &amp; Webs (Introduced Species)</b> Investigate the feeding relationships in the pond with a focus on introduced species (cane toads and mosquito fish) and their impact on native species.
1.05-1.30 (25 mins)	<b>Grading of Abiotic and Biotic Data</b> Recommending a grade for the physical, chemical and biological indicators.
130–1.50 (20 min)	<b>Second Break</b>
1.50-2.20 (30 mins)	<b>Determine and justify an overall water quality score</b> Justify the score given and compare to the Healthy Waterways Report Card.
2.20-2.30 (10 min)	<b>Farewell and Departure</b>

### Students will need:

- Covered footwear
- Sun safe clothing and hat
- Sunscreen and insect repellent already applied
- Water Bottle
- Morning Tea and Lunch
- Field booklet, Clipboard, Pencil

### Litter Free Lunch

We encourage students and staff to pack a litter free lunch. A litter free lunch contains no throwaway packaging. Everything in it can either be re-used, composted or recycled. Therefore, food is brought in re-usable containers rather than disposable plastic wrap. Drinks are brought in refillable plastic bottles. Pre-packaged foods are discouraged.

