

# Itinerary

## Australia's Energy Future

### Students will:

- Investigate renewable energies (hydro, wind, solar)
- Make and test predictions of energy consumption of household appliances
- Design and construct a model wind turbine and test variables affecting power generation
- Construct and test series and parallel circuits
- Recommend suitable options for Australia's energy future



**Toohey Forest**  
**Environmental**  
**Education**  
**Centre**

Inspiring Science Beyond the Classroom	Time	Activity		
	9.30–10.00 (30 mins)	<b>Introduction to Program and Facilities</b> Types of Energy, Australian Energy Production, Renewable/Non-Renewable, Pie Charts		
	10.00–11.20 (1 hour 20 mins)	<b>Electrical Circuits:</b> Series and Parallel Circuit construction	10.00 – 11.20 (1 hour 20 mins)	<b>Wind Turbine Investigation:</b> Students work in small groups to design and construct a model wind turbine and test variables affecting power generation.
	11.20 – 11.50 (30 mins)	<b>First Break (Inside)</b>	11.20 –11.40 (20 mins)	<b>First Break (Outside)</b>
	11.50 – 1.10 (1 hour 20 mins)	<b>Wind Turbine Investigation:</b> Students work in small groups to design and construct a model wind turbine and test variables affecting power generation.	11.40 –12.20 (40 mins)	<b>Green Energy Lab:</b> Renewable energy demonstrations (hydro, wind, solar). Calculate power usage of appliances using PowerMates
	1.10 – 1.30 (20 mins)	<b>Second Break (Outside)</b> Visiting teacher to supervise student completion of field booklets	12.20 –12.50 (30 mins)	<b>Second Break (Inside)</b> Visiting teacher to supervise student completion of field booklets
	1.30 - 2.10 (40 min)	<b>Green Energy Lab:</b> Renewable energy demonstrations (hydro, wind, solar). Calculate power usage of appliances using PowerMates	12.50 – 2.10 (1 hour 20 mins)	<b>Electrical Circuits:</b> Series and Parallel Circuit construction
	2.10 - 2.25 (15 mins)	<b>Conclusion</b> <b>Compare and Recommend:</b> Suitable options for Australia's Energy Future		
	2.25–2.30 (5 mins)	<b>Farewell and Depart</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.

