



Energy Action Australia

Energy Action Australia is a multi-audience communication tool that helps educate a nation on how the efficient use of energy impacts on global and local environments, especially in reducing greenhouse gases that contribute to global warming. It achieves this by combining education ABOUT energy with the development of energy management skills and processes for the classroom, the school, the home and the community.

Energy Action Australia provides hands-on, purposeful energy-related activities and simply and effectively explains energy concepts. It increases awareness of energy resources and how people use them, helping and encouraging the sustainable and equitable use of energy. It enables individuals to reduce energy usage and greenhouse gas emissions and schools to become models for energy efficiency in their community.

Energy Action Australia recognizes that traditional cultures around the world have a variety of stories through which their understanding of the world, the forces of nature and human's place in the world are explained. Cultural understanding and beliefs are a key element in the development and survival of all societies, determining the relationships between people as well as the relationship between humans (individually and collectively) and the natural environment. This resource draws on the cultures of the Aboriginal people and Torres Strait Island people in particular to highlight the part nature plays in providing us with energy, and our need to care for the environment. Students are encouraged to explore their own cultural heritage when pursuing these activities.

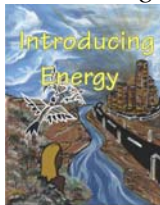
Teacher Guide

Energy Action Australia has been designed by teachers for teachers. This guide will help you plan and facilitate the program in your school. It contains an overview of how Energy Action Australia works and ideas and suggestions for whole school implementation of energy management. To assist teachers with limited science training, it provides easy-to-understand key concepts of ecosystems, energy use and greenhouse gas emissions and an overview of concept development stages for learning about ecosystems and energy.

Student Activity Books

A wide range of photocopiable activities about energy and the environment are presented in 6 themed booklets. **Each booklet commences with an outline of the energy theme and the way it is developed throughout the book, followed by specific teachers' notes on each activity. The activities themselves are presented from the point of view of the student**

Introducing Energy – Basic energy concepts and skills



The activities in this booklet develop the investigative skills and vocabulary for 'hands on' learning of energy concepts. They are the foundation for activities in the other booklets. The booklet begins with an Aboriginal perspective of the forces of nature, then covers everyday aspects of energy, including school energy needs, energy safety, making and using thermometers, reading electricity meters and energy forms and transformations.

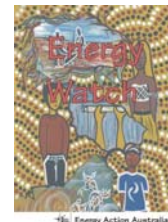
Sun, Air & Life – Our energy system and climate change

This booklet explores the community formed of living and non-living things, existing and interacting together. The focus is on developing understandings of how our use of energy impacts on the global ecosystem. The lesson sequence includes the life cycle and needs of plants, the 'nature' of air / the atmosphere, ecosystems – interactions between living and non-living things, the role of the sun, the role of carbon – the 'building block' of all living matter, and human activity – our impact on ecosystem interactions



Energy Watch – energy auditing skills

Students use the activities in this booklet (and booklet A) to investigate energy use in the classroom, school and home. Students develop knowledge and understanding of energy and efficiency issues as well as collect information and develop skills to assist in decision making on reducing the environmental, social and economic costs of energy use.



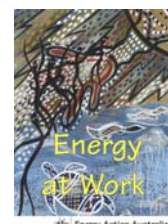
Keep Warm Keep Cool – Controlling temperature in our personal environment



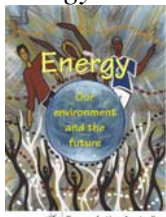
This book deals with how, in everyday life, we keep warm and cool – how we control temperature in our personal environment. In technical terms it is about thermal energy transfer and its application to heating, cooling and insulation. Whilst exploring heat transfer via convection, conduction and radiation, students discover the implications for their life: for their clothes, appliances, and buildings.

Energy at Work – electricity generation and electricity replacements

This book deals with the energy transformations that occur in the production of electricity. Beginning with the flow of electrons, the activities present various energy sources that can be used in the generation of electricity (wind, water, fossil fuels, geothermal, direct solar), as well as how electricity is distributed (transferred) to our homes. It also presents activities that look at how the sun's energy (heat and light) can be used directly to replace the need for electricity for some tasks (solar cooking, solar hot water, solar stills).



Energy: Our Environment and the future – environmental and social impacts of energy usage



This book focuses on the environmental and social impacts of our use of energy. Activities commence with a global view of patterns and implications of energy use: inequitable distribution and availability of useful energy forms, and the exceptionally high per capita greenhouse gas emissions from many developed nations. The focus is increasingly refined through a national level, then down to a local and personal level. The aim of the book is not to leave students feeling overwhelmed by the enormity of global issues, but to allow them to experience the power of individual action in helping solve global problems.

Planet Earth: This poster presents the earth as an ecosystem in which its elements are used again and again. It is an energy system in which elements such as carbon, oxygen and hydrogen change their state (solid, liquid and gas) due to energy transfers and transformations. The poster depicts the concept development stages in the study of ecosystems as related in the booklet Sun, Air and Life.

Your Electricity: This poster is particularly relevant to the Energy at Work Booklet. It is designed to enable students to follow the electricity trail from their homes through the distribution network and power station (generator) to the original energy source. It depicts a large 'power station', medium and small scale distributed generation 'plants' (including non-grid connected households), as well as the myriad of energy sources available for use to use in electricity generation.

Energy Rap: This fun song / poem summarises the key concepts of sustainability, energy and personal action. Use it to introduce the theme of energy and to encourage creative expression (including cultural perspectives) of concepts covered in the activities.

Keeping Cool – at Home: This 'spot-the-difference' poster captivates the main differences between our current unsustainable houses and habits and more environmentally sustainable homes and practices. A great tool for pre-and post- testing of students' understandings.

Ngingari and Energy: In this 16 page, full colour story book, Ngingari, a young Aboriginal girl, is introduced to the study of energy. With her grandmother, teacher and school friends, she explores the relationship between our human society and our environment. The text is written in dialogue script and contains part of the Energy Rap. The book is beautifully illustrated by Aboriginal artist Lionel Doyle.



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Product Order Form August 2007 Page 1 of 2

Please return this completed form to

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PAYMENT DETAILS: Please indicate method of payment

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Payment policy

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2. **GST** of 10% has been **included** in the listed **price** of all resources.
3. All prices are in **Australian dollars**. All payments are to be made in Australian dollars unless otherwise negotiated.
4. Products will not be posted until payment funds are cleared.
5. **Prices do not include postage. Please refer to the postage rates on the bottom of the order form.**

Item Title	Type	Price GST incl.	Quantity required	Cost
Activity Book Pack (over 80 photocopiable activities)	Teachers' Guide Book A: Introducing Energy Book B: Sun, Air and Water Book C: Energy Watch Book D: Keep Warm, Keep Cool Book E: Energy At Work Book F: Energy and the Environment	\$132.00		
Story Book	Ngingari and Energy	\$22.00		
Individual Posters	Energy Rap	\$8.80		
	Planet Earth	\$8.80		
	Your Electricity	\$8.80		
	Keeping Your Cool At Home	\$8.80		
Full Set	All books and posters	170.00		
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Total (\$AUD)				

- Postage prices for within Australia only. International post rates supplied upon request
- Professional development and program implementation assistance may be available on application.

For more information about this environment education program, contact us:

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