

# ECOLOGIC

CREATING A SUSTAINABLE FUTURE

## Shaping the Future

### Stage 4 & 5 Unit of work on *EcoLogic* for Science and Geography

#### ■ Introduction

The *EcoLogic* exhibition plus its online and print materials provide an integrated, interactive and contextual environment that encourages reflection, enquiry and collaborative learning.

Both the climate change and water issues presented in the new *EcoLogic* exhibition provide a context for students' learning in the area of sustainability.

This unit of work consists of:-

1. Pre-visit slideshow – '**Changing Times, Changing Lives**' – Facilitate discussion on how humans meet the challenges of a changing world. The pre-visit slideshow is available online at the *EcoLogic* exhibition page 'For Teachers'.
2. Visit materials – ***EcoLogic* student booklet** – Learn why we need to adopt sustainable practices and explore current technologies, comparing these with older technologies. Recognise trends and make predictions about the future.
3. Post-visit materials – Discussion of visit and synthesis questions in ***EcoLogic* student booklet**. Students present their ideas of future directions. Teachers may wish to follow up with a class project. Suggestions are provided in the student booklet.

The pre-visit slideshow is available online at the *EcoLogic* exhibition page 'For Teachers'.  
[http://www.powerhousemuseum.com/exhibitions/ecologic\\_education.php](http://www.powerhousemuseum.com/exhibitions/ecologic_education.php)

#### ■ Curriculum links

The exhibition and its resources support education for sustainability in helping students:

1. assess competing viewpoints, values and interests;
2. manage uncertainty and risk
3. make connections between seemingly unrelated concepts, ideas and outcomes;
4. test evidence and propose creative solutions that lead to improved sustainability

[Sustainability Curriculum Framework, pp. 4 & 5, Department of the Environment, Water, Heritage and the Arts, 2010]

This unit of work is developed to support the following outcomes of the Stages 4 & 5 Science and Geography:

#### Stages 4/5 Science Syllabus Links

Prescribed focus areas:

- 4/5.3 – Students learn about the applications and uses of science
- 4/5.4 – Students learn about the implications of science for society and the environment
- 4/5.5 – Students learn about current issues, research and developments in science

Knowledge:

- 4.11 – A student identifies where resources are found, and describes ways in which they are used by humans
- 5.11 – A student analyses the impact of human resource use on the biosphere to evaluate methods of conserving, protecting and maintaining Earth's resources

Skills:

- 4.19 – A student draws conclusions based on information available
- 5.19 – A student uses critical thinking skills in evaluating information and drawing conclusions

Values and Attitudes:

- 4/5.27 – A student acknowledges their responsibility to conserve, protect and maintain the environment for the future

**Geography Syllabus Links**

**Stage 4**

4G2 – Global Environments

- Students learn to explain how individuals, community organisations and government actions are contributing to the current management of the environment
- Students learn to describe current use of the environment and suggest strategies for future ecological sustainability

4G3 – Global Change

- Students learn about variations in the distribution, access and use of natural resources
  - Use of natural resources
  - Sustainability of natural resources
- Students learn to identify global patterns of resource use
- Students learn to explain the link between resource use and sustainability

4G4 – Global Issues and the Role of Citizenship

- Students learn about global geographical issues, which must include:
  - Access to fresh water
  - Climate change
  - Energy use

- Students learn about the need to promote ecological sustainability
- Students learn to explain the links between human actions and the consequences for ecological sustainability on a global scale

**Stage 5**

5A3 – Issues in Australian Environments

- Students learn about geographical issues affecting Australian environments including:
  - land and water management
  - waste management
- Students learn to describe each geographical issue in relation to:
  - Its nature
  - Its impacts
  - The responses by individuals, groups and governments to the issue
- Students learn to outline how a range of geographical issues are affecting Australian environments
- Students learn to explain the interaction of the physical and human elements of the environment
- Students learn to propose actions that promote sustainability

5A4 – Australia in Its Regional and Global Contexts

- Students learn about implications of population trends:
  - ecological sustainability
  - population movement and urban planning
- Students learn to analyse current and future population trends and their implications

**For more information on the exhibition *EcoLogic: creating a sustainable future*, visit the Powerhouse Museum's website <http://www.powerhousemuseum.com/exhibitions/ecologic.php>**

For more information about education support or your booking, contact Bookings at the Powerhouse Museum:  
Telephone — (02) 9217 0222  
Fax — (02) 9217 0622  
Email — [edserv@phm.gov.au](mailto:edserv@phm.gov.au)

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	<p>500 Harris Street Ultimo PO Box K346 Haymarket 1238 <a href="http://www.powerhousemuseum.com">www.powerhousemuseum.com</a></p>
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