

EDUCATION FOR SUSTAINABILITY:

A brief look at policy and practice

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'Sustainability Education should occur as part of everyday lessons for the purpose of developing knowledge, skills and positive environmental attitudes and values, that build the capacity of students to live more sustainably in their school and community'

'Critical review of current practice and research of environmental education and education for sustainability for Kindergarten to Year 12 from 1990' – K. Skamp, Southern Cross University, April 2010 – as referred to in Sustainability Education PPT¹

Since the introduction of the NSW Environmental Education Policy (2001) and the Sustainable Schools NSW program, schools across NSW have become more sustainable places of work and learning as well as places of education for sustainability. Recycling schemes, school gardens, water fountains, waste audits, the installation of solar panels and water tanks, environmental clean-up days and paperless administration are some of the ways schools have promoted sustainability and developed partnerships between students, school management and school communities. Education about sustainability is clearly taking place, however education for sustainability, in which students are empowered to make decisions (Figure 1) and take action is less well developed across the curriculum.

Figure 1: Student learning for Sustainability in NSW schools

"Learning for sustainability seeks to enable and empower students to make decisions and take actions that contribute to creating a sustainable society and ecosystem. Sustainability action is both a preferred pedagogical approach for teaching sustainability and an essential set of knowledge and skills for students to learn.

This learning is best delivered through a wide range of teaching and learning activities utilising all of the Key Learning Areas. Students will develop strong environmental knowledge, awareness and capacity for positive environmental change when it is contextualised or taught using real examples, problem solving and with active student participation."

http://www.curriculumsupport.education.nsw.gov.au/env_ed/teaching/index.htm

Despite the documentation and resources provided to support NSW schools in implementing education for sustainability across all KLA's many initiatives remain school rather than classroom based programs, often involving only a small number of students. This is particularly the case in high schools. The responsibility for developing student conceptual understanding and the application of sustainability principles to real world problems has principally fallen on Geography (HSIE or Social Science) Science and D & T teachers where sustainability is integral to subject knowledge, understanding and skill development.

Australian Curriculum: Sustainability is a LAC priority

The Australian Curriculum emphasises the importance of learning for sustainability with the inclusion of sustainability as a Learning Across the Curriculum (LAC) priority². The expectation is that education for sustainability will be incorporated in varying degrees and where relevant within all subject areas. To assist schools implement LAC priority areas into each subject an explanation and set of organising ideas outlining essential knowledge, understandings and skills for each priority is provided on the Australian Curriculum website.

Figure 2: Australian Curriculum Cross Curriculum Priority: Sustainability

"Sustainability addresses the ongoing capacity of Earth to maintain all life.

Sustainable patterns of living meet the needs of the present without compromising the ability of future generations to meet their needs. Actions to improve sustainability are both individual and collective endeavours shared across local and global communities. They necessitate a renewed and balanced approach to the way humans interact with each other and the environment.

1. Sustainability Education PowerPoint Presentation – http://www.curriculumsupport.education.nsw.gov.au/env_ed/assets/powerpt/sustainabilityeducation.ppt

2 The Australian Curriculum: Cross Curriculum Priority –<http://www.australiancurriculum.edu.au/CrossCurriculumPriorities/Sustainability>

Education for sustainability develops the knowledge, skills, values and worldviews necessary for people to act in ways that contribute to more sustainable patterns of living. It enables individuals and communities to reflect on ways of interpreting and engaging with the world. Sustainability education is futures-oriented, focusing on protecting environments and creating a more ecologically and socially just world through informed action. Actions that support more sustainable patterns of living require consideration of environmental, social, cultural and economic systems and their interdependence."

<http://www.australiancurriculum.edu.au/CrossCurriculumPriorities/Sustainability>



Produce vendors, Varanasi. Source: J. Curtis

Figure 3: Organising ideas: Sustainability³

Code	Organising ideas
Systems	
OI.1	The biosphere is a dynamic system providing conditions that sustain life on Earth.
OI.2	All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.
OI.3	Sustainable patterns of living rely on the interdependence of healthy social, economic and ecological systems.
World Views	
OI.4	World views that recognise the dependence of living things on healthy ecosystems, and value diversity and social justice are essential for achieving sustainability.
OI.5	World views are formed by experiences at personal, local, national and global levels, and are linked to individual and community actions for sustainability.
Futures	
OI.6	The sustainability of ecological, social and economic systems is achieved through informed individual and community action that values local and global equity and fairness across generations into the future.
OI.7	Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.
OI.8	Designing action for sustainability requires an evaluation of past practices, the assessment of scientific and technological developments, and balanced judgments based on projected future economic, social and environmental impacts.
OI.9	Sustainable futures result from actions designed to preserve and/or restore the quality and uniqueness of environments.

3. Organising ideas: Sustainability – <http://www.australiancurriculum.edu.au/CrossCurriculumPriorities/Sustainability>

The emphasis on education for sustainability at state and national levels, and the impending implementation of the Australian Curriculum from 2011 led to the development of a national organisational framework. The framework was designed to assist syllabus developers at national and state levels to incorporate education for sustainability across all levels and subjects.

The *Sustainability Curriculum Framework* document (Figure 5) developed for the Australian Government supports problem-based learning about sustainability across the curriculum through the *Sustainability Action Process* (SAP) (Figure 6). The framework emphasises the importance of developing student capabilities in decision making and taking action on matters related to sustainability. (Figure 4) The SAP illustrates how education for sustainability can be incorporated into the curriculum of all subjects and at all stages using a 5-step scaffold (An example of the application of SAP to a sustainability issue is provided in Figure 5).

- Making a case for change
- Developing the scope
- Defining the proposal
- Implementing
- Evaluating and reflecting

Figure 4: The importance of education for sustainability

"Education for sustainability is both present- and future-oriented. It's about learning to design and implement actions for the present, in the knowledge that the impact of these actions will be experienced in the future. In this way it leads to students developing an overall capacity to contribute to "a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations".

<http://www.environment.gov.au/system/files/resources/9b2e74ca-c909-4d57-bae3-c515c20957de/files/curriculum-framework.pdf>

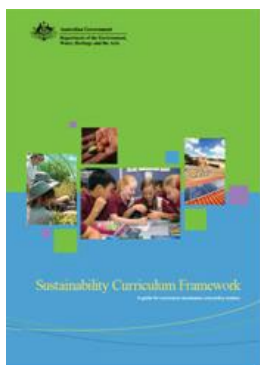


Figure 5: Sustainability Curriculum Framework⁴

⁴ Sustainability Curriculum Framework – <http://www.environment.gov.au/sustainability/education/publications/sustainability-curriculum-framework-guide>

Figure 6 Applying the Sustainability Action Process⁵

The SAP scaffold can be used to develop student capability to implement sustainability action as illustrated by the Clever Climate Energy Savers Project.



Beyond the Geography classroom

Geography lends itself to education for sustainability in subject matter and skill development within the existing NSW Geography Syllabus and the yet to be published syllabus for NSW based on the Australian Curriculum. There are clear links between the *Geographical Inquiry Process* of the Australian Curriculum (in which students develop questions, conduct inquiry, propose actions and to take action if appropriate) and the *Sustainability Action Process* (which requires the identification of a need for action, the development of proposals to address issues related to sustainability, the implementation of proposals and an evaluation of completed projects). The current *Stage 5 Research Action Plan* and *Senior Geography Project* have similar connections.

At a whole school level Geographers can play a leadership role in developing programs within their school that incorporate education for sustainability across subject areas. Examples include

- Curriculum mapping to determine the scope and depth of education for sustainability across the curriculum as the Australian Curriculum is implemented.
- Professional development of school staff in sustainability issues, teaching strategies and resource development (to develop consistent approaches and avoid repetition).

⁵ Sustainability Action Process – http://www.curriculumsupport.education.nsw.gov.au/env_ed/teaching/index.htm

- Assisting individual faculties with programming ideas.
- Broadening the scope of new or current Geography or HSIE programs to include whole school involvement eg. **Merewether High School Green Day** (See next article).
- Developing a cross curriculum sustainability project involving a whole year cohort eg **Epping Boys High School Cross Curriculum Sustainability Project** (See following article).

Integrating education for sustainability in NSW schools, as an Australian Curriculum Learning Across the Curriculum (LAC) priority is best served with a whole school approach to ensure that

- learning about sustainability has coherence, sequence and balance;
- the development of student capabilities for taking action on sustainability is consistent, incremental and stage appropriate; and
- repetition of sustainability issues in different subject areas and across year cohorts is avoided (after all we don't want other subjects teaching our best topics).

While NSW Geographers eagerly await the new NSW Australian Curriculum for Geography might I suggest that this is an ideal time to examine the teaching programs of subjects that have implemented their NSW (Australian) Curriculum syllabuses (English, Maths,

Science, History) to assess the extent that teaching for sustainability has been incorporated. This approach will save time and angst when the time comes to program and teach the new NSW Geography syllabus.

References

- Sustainability Education PPT (NSW DEC 2011)
http://www.curriculumsupport.education.nsw.gov.au/env_ed/assets/powerpt/sustainabilityeducation.ppt
- Sustainability Curriculum Framework website
http://www.curriculumsupport.education.nsw.gov.au/env_ed/teaching/framework/index.htm
- Sustainability Curriculum Framework document
<http://www.environment.gov.au/education/publications/curriculum-framework.html>
- Sustainability Curriculum Framework
<http://www.environment.gov.au/sustainability/education/publications/sustainability-curriculum-framework-guide>
- Environmental Education in the curriculum (NSW)
http://www.curriculumsupport.education.nsw.gov.au/env_ed/teaching/kla_sup/index.htm
- Australian Curriculum: Cross Curriculum Priorities: Sustainability – <http://www.australiancurriculum.edu.au/CrossCurriculumPriorities/Sustainability>
- Sustainability Action Process – http://www.curriculumsupport.education.nsw.gov.au/env_ed/teaching/index.htm



THE 2014 HSC EXAMINATION REVIEW

Afternoon workshops will focus on investigating, reflecting on and preparing for the 2015 HSC Geography examinations. Experienced presenters have all marked the recent HSC paper and will share their comments about the HSC Geography Examination.

LOCATIONS AND DATES:

Five Dock – Wednesday 18 February
Venue: Rosebank College

Newcastle – Wednesday 25 February
Venue: Merewether High School

Wollongong – Wednesday 4 March
Venue: St Marys Star of the Sea

REGISTRATION CLOSES:

One week prior to each event. Information will be sent to all schools and online registration will be available on the GTA NSW website – www.gtansw.org.au