

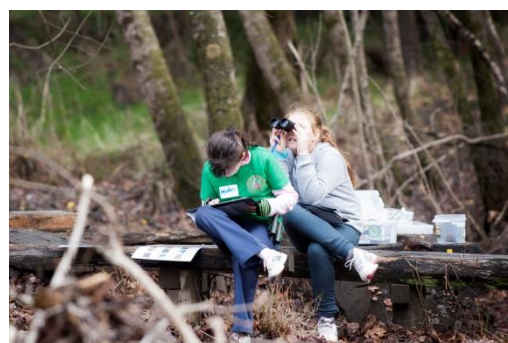
Education for Sustainability Resources and the Australian Curriculum

Education for sustainability develops the knowledge, skills, values and world views 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.

Australian Curriculum Assessment and Reporting Authority, 2015

The Education for Sustainability (EfS) approach and the Australian Sustainable Schools Initiative-South Australia (AuSSI-SA) are underpinned by principles, practices and learning intentions outlined in the learning areas of the Australian Curriculum. The Australian Curriculum also encompasses knowledge, skills and behaviour to develop the capability of students to explore and engage in sustainability. The ways in which EfS relates to various areas of the curriculum and pedagogy are outlined below.

Cross Curriculum Priority: Sustainability –Sustainability addresses the ongoing capacity of the earth to maintain all life. Participation in EfS provides authentic contexts to develop “sustainable patterns of living that 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”. *Australian Curriculum Assessment and Reporting Authority, 2015*



General Capabilities - Participation in EfS gives educators the opportunity to develop the goals set out in the *Melbourne Declaration on Educational Goals for Young Australians* (MCEETYA 2008) –supporting them “to become successful learners, confident and creative individuals, and active and informed citizens...individuals who can manage their own wellbeing, relate well to others, make informed decisions about their lives, become citizens who behave with ethical integrity, relate to and communicate across cultures, work for the common good and act with responsibility at local, regional and global levels”. *Australian Curriculum Assessment and Reporting Authority, 2015*

EfS supports teachers to develop their practice in the three domains of the South Australian Teaching for Effective Learning (TfEL) Framework: create safe conditions for rigorous learning, develop expert learners, and personalise and connect learning.



Teaching for Effective Learning Framework –The TfEL key messages help leaders and teachers focus on what characterises effective teaching. Focusing on the pedagogy of educators can ensure that their teaching maximises students’ engagement and achievement. Educators enable students to find their own strengths, challenge their habits and perceptions, provide dialogue and collaboration for co-construction, become multi-literate, carry out challenging but achievable tasks, have control over their own learning, and undertake varied assessment. *Government of South Australia, Department of Education and Children’s Services, 2010*



NRM Education resources

NRM Education has developed a suite of resources linked to the Australian Curriculum including teacher information packs, units of work, identification charts, fact sheets and more. These resources will be of particular interest to educators who want to integrate learning across subjects, learning areas and year levels.

NRM Education encourages AuSSI-SA sites to use NRM Education resources and learning experience ideas that incorporate the EfS approach so that students are not only engaged in gaining an understanding of content, but also internalise and practice the values, skills, and behaviours involved in living sustainably. NRM Education resources are designed to provide ideas for teachers to 'adopt or adapt' to the needs and interests of their students. Our links to the Australian Curriculum are intended as a starting point, from which teachers are encouraged to explore the potential of our resources for rich, integrated teaching across many areas of learning.

NRM Education resources encourage students to...

Think like a geographer:

- explore the connections between the environment and people
- notice the differences in local environments
- pose questions, investigate and plan an inquiry
- collect data from primary and secondary sources
- record, represent and interpret data including maps
- draw conclusions based on evidence, information and data
- explore options of what we (individually and collectively) could do to improve and protect our local environments
- take action in response to what students learn.

Think like a scientist:

- develop an understand of how living things, including plants and animals, depend on each other and the environment to survive
- develop a deeper understanding of living things; their life cycles, structured features and adaptations, and requirements for survival
- pose questions that can be tested scientifically
- predict what the results might be
- suggest how to improve the method to get more accurate results
- safely use tools and equipment to take measurements
- represent data in many ways
- identify patterns and trends.

Think like a mathematician:

- take measurements
- make calculations using common metric units
- interpret information in maps
- collect data and construct suitable data displays
- understand how different data methods can more clearly show patterns or trends more than others.

Food for Thought

These resource sheets have been developed to challenge students to think about some of the many facets of growing, producing, and distributing food. An emphasis on the science is included.

The human population is rapidly increasing and the area of land committed to the growing food is being reduced in Australia, as well as a majority of food which comes at a cost to social, ecological and economic systems.

Sustainably there are increasing demands on our society and we need to ensure that our food can meet the needs of the future and that we do not have enough access to food.

Biologically our food has a large carbon footprint due to production, processing, transportation and waste.

Economically the true cost of food is not reflected in the price. We hope that as you understand more about the complex systems and challenges involved in obtaining our daily food, you will consider and try new sustainable options.

Overview

For each of the seven resource sheets students will research, report and take action on various aspects of food sustainability in Australia and the world from the ancient past to the present and future.

The sheets all consist of a literacy component which outlines the main purpose and objectives of the aspect of food production and is an ideal tool for thought questions or challenges to encourage student engagement, reflection and a personal connection with the topic.

Teachers can choose and decide with students which topics and the number and kind of challenges they will undertake to meet their needs and interests. The challenges involve individual or group work and writing length of time. The worksheets include which are useful as assessment products.

The resource sheets:

1. Why did ancient civilisations settle where they did?
2. What are the advantages and disadvantages of modern culture and western civilisation (the world)?
3. What are food miles?
4. Is organic a better food?
5. Can we sustainably modify our environment?
6. How can we live within the means of the planet?
7. What are the challenges to sustainable food production in Australia?

Additional Curriculum links

All the general capabilities and cross-curriculum priority of sustainability are strongly represented along with the other cross-curriculum priorities of Aboriginal and Torres Strait Islander Histories and Cultures and Asia and Australia's engagement with Asia in senior schools.

Many of the Food for Thought questions raise challenges connected to the areas of the learning areas.

Capacities include:

English aims to ensure that students:

- acquire the basic skills, using spoken, written, visual and other communication modes and represented systems, to access and understand texts as well as a growing range of contexts with accuracy, fluency and confidence.
- appreciate, enjoy and use the English language in all its varieties and understand the nature of its structure and power to create feelings, convey information, form a style, and have interaction with others in various contexts and media.

Classroom development goals from the Australian Curriculum Development Framework:

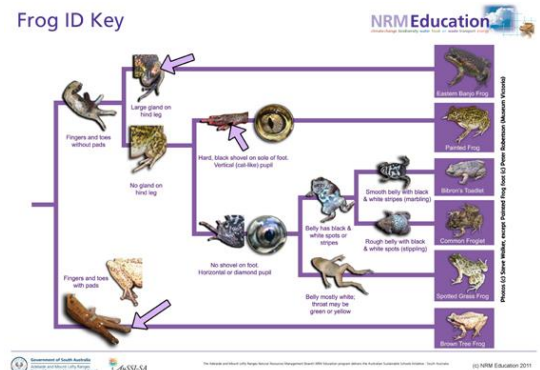
- knowledge, understanding and appreciation of the past and the times that have shaped Australian society.
- understanding and use of historical concepts, such as evidence, continuity and change, cause and effect, perspectives, empathy, significance and consequence.
- capacity to undertake historical inquiry, including skills in the design and use of primary, secondary and contemporary sources.

History aims to ensure that students develop:

- interest and enjoyment of historical study for lifelong learning and work, including their capacity and willingness to be informed and active citizens.

Science aims to ensure that students:

- understand and use scientific concepts, such as evidence, continuity and change, cause and effect, perspectives, empathy, significance and consequence.
- capacity to undertake historical inquiry, including skills in the design and use of primary, secondary and contemporary sources.



Further information

For more information about how NRM Education can support your AuSSI-SA site visit:
<http://www.naturalresources.sa.gov.au/adelaidemtloftyranges/education/for-educators/>



Government of South Australia



Natural Resources Adelaide and Mt Lofty Ranges