

## **Australian Capital Territory**

Curriculum in ACT schools is largely developed in schools. The ACT has guidelines for the development of curriculum in the form of the ACT Curriculum Frameworks and Across Curriculum Perspectives documents. These are complemented by the Curriculum Profiles that describe the progression of learning typically achieved by students in years K-10 in each of the learning areas. The broad outcomes in the Curriculum Frameworks provide the overarching statements from which schools develop their own curriculum materials.

Key Learning Areas and subjects reviewed:

### ***Compulsory years***

Science  
Studies of Society and Environment  
Technology  
English  
Mathematics  
The Arts  
Health and Physical Education  
LOTE

### **Territory-wide document on Environmental education**

An important component of curriculum development in the ACT is the nine across curriculum perspectives, one of which is environment education. ACT teachers originally identified these perspectives as matters they addressed in the classroom that were not included in curriculum documents, 'a hidden curriculum'.

Across curriculum perspectives encompass educational and societal issues of significance that cross all curriculum boundaries. *They should be embedded in all sections of course documents and be included in all classroom practice. They enable teachers to approach the curriculum in a way that complements and enriches the various learning areas.*

The across curriculum perspectives apply to all ACT curriculum frameworks from Preschool to Year 12.

*The Environment Education Curriculum Support Paper (1997)* is an important document as it outlines the place of environmental education in the ACT as an across curriculum perspective.

*Environment education is about people as part of the living planet and focuses on the interaction of the natural, built (urban and rural), social and cultural aspects of the environment. It deals with facets of this interaction, from the personal to the global.*

*Environment education is the development of:*

- *understandings about our environment*
- *positive attitudes towards the earth and its life*
- *confidence and skills to make positive changes.*

The paper details outcome statements that set out what the student knows and is able to do in environment education. These outcomes, which are interrelated, interdependent and of equal significance, are grouped under the headings of values, skills, knowledge and concepts, and application.

Through environment education, the paper argues, students from Pre-school to Year 12 will learn to understand, actively care for and enjoy the environment, thereby helping to ensure the continuation of the diversity of life on this planet.

The paper also details advice on the following:

- Learning and teaching for an environment education perspective
- Selecting content from an environment education perspective
- Implementing the environment perspective in the key learning areas
- Assessing and reporting for an environment education perspective
- Evaluating from an environment education perspective
- Resources in the ACT

## **Mapping environment education**

Environmental Education in the ACT is an across curriculum perspective, and as such is incorporated into all KLAs. Importantly, the Environment Education Curriculum Support Paper (EECSP) outlines each of the KLAs and ways of integrating an environmental perspective into these. It provides a good indication of how environmental education fits into the ACT curricula and forms the basis of the mapping of environmental education in the ACT as outlined below. The EECSP is applicable to all courses from pre-school to Year 12.

Unlike the state curriculum documents, the ACT curriculum documents are developed around broad outcomes that are scoped in bands from early to post compulsory years. As such, the mapping process for this audit, which uses the student learning outcome as the unit of analysis, is not applicable with the ACT documents. The KLA reports, therefore, are descriptive only.

Because of the general nature of the outcomes in some Key Learning Areas, it was not always possible to analyse the information provided in terms of the indicators used to establish the rating for Environmental Education for Sustainability (EEFS) in other states. Thus for some learning areas an EEFS rating in the form of a star rating is not provided.

## **Compulsory years**

### **Science**

#### **General comments:**

*The Science Curriculum Framework states that environmental education in science will focus on the use people have made of scientific discoveries and developments, and the effects of these on the environment. Solutions to environmental problems through the application of scientific principles will be promoted.*

An environmental perspective will give students science learning experiences

Which will:

- increase their acquisition of ecological concepts
- develop a commitment for positive action for the environment
- provide effective modelling of environmentally friendly practices in science
- increase their understanding of the interdependence of all living things
- increase their understanding the dependence of all living things on the non living environment
- demonstrate the need to conserve resources
- demonstrate the need to explore ecologically sustainable developments.

#### **Overall:**

The science Curriculum Framework contains a few direct references to environmental education. It provides a range of opportunities for the implementation of environmental education.

Education for Sustainability rating



The Environment Education Curriculum Support Paper (EECSP) identifies that science can help students develop key ecological concepts and relate them to their everyday lives, promoting an awareness and understanding of the interrelationships of all aspects of the environment. An environmental perspective allows students to understand the importance of science to society and the environment, to develop a sense of inquiry, and think creatively about solutions to environmental problems.

The EECSP notes the following features of scientific knowledge that relates specifically to environmental education and can be explored in a variety of ways:

- the inter-relatedness of life
- the cycling of matter
- the flow of energy
- change and adaptation within communities
- human dependence on the earth's systems for life and for the materials and energy

we use:

- problems resulting from human intervention in the natural environment
- issues that explore people's connection to ecological systems
- predictive techniques, hypothesising and evaluating scenarios.



## **Studies of Society and Environment**

### **General comments:**

The Studies of Society and Environment Curriculum Framework states that environment education has a central place in disciplines such as ecology, economics and geography and an important role throughout studies of society and environment. Environmental issues, past and present, are investigated and social, political and economic solutions to environmental problems promoted.

An environmental perspective gives students learning experiences that lead to:

- recognition of changes in the natural, built, social and cultural environment over time
- explanations of patterns of interaction in the environment
- understanding of different cultural views of the environment
- understanding of ecologically sustainable development
- understanding of the impacts on the environment of different societies
- understanding of contemporary environmental issues
- positive attitudes towards the environment
- confidence and skills to support a commitment to take positive action for the environment.

### **Overall:**

The Studies of Society and Environment Curriculum Framework contains a number of direct references to environmental education. It provides a range of opportunities for the implementation of environmental education.

Education for Sustainability rating

★★★

The Environment Education Curriculum Support Paper identifies that an environmental perspective allows students to gain a theoretical and practical knowledge of natural systems and their interrelationship with social systems.

## **Technology**

### **General comments:**

The Technology Curriculum Framework states that environment education in technology focuses on human interaction through technology use and development with the ecological processes.

The perspective provides students with opportunities to:

- use technology in an environmental setting
- use natural materials in a process of designing, making and appraising
- assess the important synthetic materials
- examine ways of improving use of resources
- consider the use of natural resources from an environmental perspective

- make decisions about what technologies are developed from an environmental perspective.

**Overall:**

The Technology Curriculum Framework contains a few direct references to environmental education. It provides a range of opportunities for the implementation of environmental education.

Education for Sustainability rating



The Environment Education Curriculum Support Paper notes how students examine the relationship between the natural and built environments and appraise the use of technology and its impact in terms of ecologically sustainable development. They also design, make and appraise technical solutions to environmental challenges.

**English**

**General Comments:**

The English Language Curriculum Framework states that environmental education in English focuses on the understanding and use of language referring to environmental and ecological issues. English studies also emphasise the richness of the environment as a source of information for writing and speaking.

This perspective provides students with learning experiences which enable them:

- to use language referring to the environment appropriately and effectively
- to debate and respond to environmental issues
- to communicate to others, both visually and orally, an appreciation of their environment
- to be discriminating about the great volume of information about the environment in the media
- to respond to literature that explores the environment.

**Overall:**

The English Language Curriculum Framework provides a significant number of opportunities for environmental education.

The Environment Education Curriculum Support Paper notes that approaching English language from an environmental perspective provides a variety of rich experiences in reading, writing, listening and speaking that assists the students' exploration and appreciation of the environment. Writing, reading, listening and speaking about the environment encourage students to be discriminating about the mass of information and opinion they receive from the various media. It also notes that the outcomes in the ACT English Curriculum Framework are all relevant for environment education and will enable students to understand and use the language of environmental and ecological issues.

## **Mathematics**

### **General comments:**

The Mathematics Curriculum Framework states that an environment perspective in mathematics enables students to understand and use the mathematics involved: in studying the environment; when participating in environmental projects; in the environmental debate; and utilise the environment in the study of mathematics. In educational settings where students experience and use mathematics with an environmental perspective and where teachers model environmentally friendly practices students will:

- increase their acquisition of ecological concepts;
- develop awareness and understand the interrelatedness of all aspects of the environment
- develop a commitment for positive action for the environment.

### **Overall:**

The Mathematics Curriculum Framework provides a number of opportunities for environmental education.

The Environment Education Curriculum Support Paper notes that mathematical skills assist students to deal with changes in society, technology and the environment as a whole.

An environment perspective in mathematics education assists students develop the skills to perform a wide range of tasks that help them understand the environment and their place in it.

## **The Arts**

### **General comments:**

The Arts Curriculum Framework notes that this perspective in the arts focuses on the environment as stimulus for creative responses and as a source for materials. The arts are powerful media for communicating positive attitudes to environmental sustainability. Teaching and learning practices should promote environmentally friendly recycling and waste disposal.

An environmental perspective will provide students in the arts with opportunities to:

- explore environmental issues as themes for expression in dance, drama, media, music and visual arts
- experiment with different materials with an understanding of their source, possible conservation, recycling qualities and responsible disposal
- use visual, aural, tactile and kinaesthetic symbols to communicate ideas and feelings about environmental issues such as preservation of rainforests.

### **Overall:**

The Arts Curriculum Framework provides a number of opportunities for environmental education.

The Environment Education Curriculum Support Paper states that the environment stimulates the expression of feelings and ideas and is a context within which physical skills, sensory discrimination and aesthetic and cognitive understandings develop. The Arts provide avenues for appreciating, understanding and learning more about the environment. Their visual, aural, tactile and kinaesthetic symbol systems are a valuable means of communicating ideas and feelings about the environment. They can also be used to analyse the values and beliefs underpinning environmental issues, and to explore solutions to environmental problems.

## **Health and Physical Education**

### **General comments:**

The Health and Physical Education Curriculum Framework notes the following environment education perspective:

- develops understanding of how ecological processes affect health
- focuses on the interaction between students and the natural, built, social and cultural environments
- develops understanding of the links between the environment and individual and community health
- fosters knowledge about and positive attitudes towards the environment
- develops the confidence and skill to take positive action for the environment
- models environmentally friendly practices.

### **Overall:**

The Health and Physical Education Curriculum Framework provides a number of opportunities for environmental education.

The Environment Education Curriculum Support Paper notes that in this KLA, students study the environmental issues that impact on their health and that of their families, the community and the planet.

## **LOTE**

### **General comments:**

The LOTE Curriculum Framework provides a few opportunities to include environmental education.

The Environment Education Curriculum Support Paper notes that in this KLA, students learn about the perceptions and responses of people from the LOTE culture to the environment. They compare the attitudes of the LOTE cultures with those in Australia and look at global/environmental challenges and solutions that affect the LOTE area.



