

# Sustainable Development Education Panel

First Annual Report 1998

## Annex 4 - Submission to the Qualifications and Curriculum Authority

**A REPORT TO DFEE/QCA ON EDUCATION FOR SUSTAINABLE DEVELOPMENT IN  
THE SCHOOLS SECTOR FROM THE PANEL FOR EDUCATION FOR SUSTAINABLE  
DEVELOPMENT - 14 SEPTEMBER 1998**

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## A: Introduction

This report is the Panel for Sustainable Development Education's contribution to the current National Curriculum Review.

The Panel, chaired by Sir Geoffrey Holland, is submitting the report to the Department for Education and Employment (DfEE) and the Qualifications and Curriculum Authority (QCA). It is also submitting the report to the Department for Environment, Transport and the Regions (DETR).

### **EDUCATION FOR SUSTAINABLE DEVELOPMENT**

Education for sustainable development is not new. It has roots in environmental education, which has evolved since the 1960s, and in development education which first emerged in the 1970s, and also links with a number of related approaches to education which stress relevance to personal, social, economic and environmental change. In the past decade these approaches have increasingly found commonality under the label of 'education for sustainable development' and there is a strengthening consensus about the meaning and implications of this approach for education as a whole.

The mandate for education for sustainable development is extensive, and includes numerous ministerial statements over the last ten years, a joint DfEE and DoE conference in 1995, the 'Government Strategy for Environmental Education' 1996, and the recent establishment of the Panel for Education for Sustainable Development as well as the Development Awareness Working Group. Further, the government's commitment to sustainable development is manifest in the current revision of the Sustainable Development Strategy and the recent Department for International Development White Paper 'Eliminating World Poverty'.

Internationally, the government is a signatory of Agenda 21 of the 1992 UNCED conference, which stated that 'education is critical for promoting sustainable development and improving the capacity of the people to address sustainable development issues' (Chapter 36, Agenda 21, UNCED, 1992) and is party to the process of international monitoring of the implementation of Agenda 21.

At school level, both environmental education and development education have enjoyed some support from statutory agencies, for example SCAA's Teaching Environmental Matters Through the National Curriculum (1996).

Despite this endorsement, and significant levels of interest by teachers (Attitudes of Teachers Towards Environmental Education, MORI 1997), education for sustainable development has long had a marginal presence in schools. For example, a minority of schools have a written environmental education policy (MORI 1997). This may be for three related reasons: one, that at practitioner level, education for sustainable development tends to be practised by the minority who already understand or have enthusiasm for it; two, teacher education courses do very little to train people in this approach; and three, that education for sustainable development has no statutory status.

In submitting this report, the Panel hopes that the meaning of education for sustainable development will be made sufficiently clear to enable closure of the long-standing gap between official endorsement and practical educational policy in this area of education.

## **THE REPORT**

The Panel has deliberately chosen not to repeat in any detail the arguments for education for sustainable development. The case for an education which enables young people to participate in efforts to achieve a more sustainable future is largely understood and endorsed by policy makers and teachers, business and the community.

What is less widely understood is what education for sustainable development looks like in practice, in terms of learning outcomes. This is where the report makes a fresh statement.

## **THE POSITION OF THE REPORT**

As far as has been possible, the Panel has considered its work in relation to parallel initiatives, these being the Advisory Group on Citizenship; the Advisory Group on Personal, Social and Health Education, and the Advisory Committee on Creative and Cultural Education, as well as current QCA documents and advice, for example on spiritual, moral, social and cultural development.

The Panel does not see this report in any way competing with these parallel reports, but argues that sustainable development, which essentially concerns the harmonious interrelationship of the economy, society and the environment is the fundamental challenge that all societies face as we approach the next century. This context, which will be critical to the quality of young people's lives in the immediate and distant future, is largely missing in much current thinking about educational theory and practice.

While education for sustainable development has a distinct contribution to make to the curriculum and pedagogy, there is also, as might be expected, complementarity between it and other approaches which seek to increase the relevance of the current curriculum. In addition, there are areas of generic knowledge, values and skills in the curriculum which are affirmed by and may be approached through education for sustainable development, but for reasons of clarity the report does not reiterate these.

Education for sustainable development is very often a matter of extending, rather than replacing, current thinking and practice. To that end, the report has concentrated on illuminating, as far as possible, the nature of that extension and enrichment.

## **THE PROCESS**

The report has resulted from an intensive consultation process over the summer of 1998. In June, an innovative internet debate between thirty teachers, academics and NGO education staff was hosted on behalf of the Panel to develop learning outcomes at generic and key stage levels, and this work was subsequently built upon and refined by the Panel's Schools Sub-Group.

The Panel considers education for sustainable development to be an area of increasing relevance and significance, and expects that the learning outcomes reflected here will need to be revisited periodically to reflect the dynamic nature of social change and educational thinking in relation to sustainability.

## B: Rational and Definitions

### **RATIONALE**

The rationale for the effective inclusion and integration of education for sustainable development into the school curriculum follows:

- Consensus - there is an emerging consensus amongst public, government and business on the need to move with some urgency towards more sustainable lifestyles if future generations are to enjoy quality of life.
- Understanding - all people are directly affected by sustainable development issues but while awareness of these issues is high, the general level of understanding of these issues and of their significance and relevance is poor .
- Policy - while education has long been recognised as a key instrument for achieving participative citizenship in relation to sustainable development, policies that support practical educational change in this regard have been largely absent.
- Entitlement - all pupils need to be equipped with the knowledge, values and skills in the area of citizenship and sustainable development that will allow them to participate as full members of society and work towards solutions to sustainable development problems and issues.
- Effective education - education for sustainable development can motivate teachers and pupils resulting in effective teaching and learning which meets many established educational goals.

### **DEFINITION**

Education for sustainable development implies a quality of change in educational thinking and practice that is not simple to capture in a single definition. This characteristic is reflected in the number and variety of definitions that have emerged in recent years both in the UK and internationally.

The following is the overarching definition for education for sustainable development that will be used by the Panel for all its areas of work and contains clear indications of its scope.

*'Education for sustainable development is about the learning needed to maintain and improve our quality of life and the quality of life of generations to come. It is about equipping individuals, communities, groups, businesses and government to live and act sustainably; as well as giving them an understanding of the environmental, social and economic issues involved. It is about preparing for the world in which we will live in the next century, and making sure that we are not found wanting.'*

For this sector specific document this definition is simplified, principally because it is followed by a clear elaboration of the scope of education for sustainable development within formal education and schools.

A definition that will having meaning and currency with the schools sector must have immediacy and directness. The Panel offers the following:

*'Education for sustainable development enables people to develop the knowledge, values and skills to participate in decisions about the way we do things individually and collectively, both locally and globally, that will improve the quality of life now without damaging the planet for the future.'*

## C: Key Concepts of Sustainable Development

Sustainable development concerns a wide range of interrelated issues which may be approached through the following seven principles or dimensions. The first concerns the interdependent nature of the world. This gives rise to the need for a participative response through the exercise of citizenship and stewardship, which is the theme of the second concept.

The third through to sixth concepts cover further key dimensions of sustainable development, leading to the seventh which, as a logical consequence of those that precede, is concerned with the limits of knowledge and exercise of the precautionary principle.

1. Interdependence - of society, economy and the natural environment, from local to global
2. Citizenship and stewardship - rights and responsibilities, participation, and cooperation
3. Needs and rights of future generations
4. Diversity - cultural, social, economic and biological
5. Quality of life, equity and justice
6. Sustainable change - development and carrying capacity
7. Uncertainty, and precaution in action

## D: Generic Learning Outcomes

The above seven key concepts, which concern aspects of sustainable development, inform the curriculum of education for sustainable development. This can be elaborated, as below, in terms of values, skills and understandings which have generic relevance across the curriculum.

It should be noted at the outset that this document takes as a first principle that the achievement of the outcomes of education for sustainable development is a function of the whole curriculum and thus requires engagement of all subjects. It also assumes an impact on whole school development, including whole school ethos, curriculum, pedagogy, organisation and community links, emphasising participation, coherence and consistency within and between these aspects.

The following outcomes attempt to cover the broad spectrum of issues that fall under the economic, social and environmental aspects of sustainable development and their interrelationship.

A number of important learning outcomes of education for sustainable development, particularly those which refer to skills and aptitudes (such as problem-solving), apply to education as a whole and may be seen as important to any good educational practice. For clarity and brevity, these are either touched on in terms of giving context and further relevance through sustainable development, or omitted.

Key Concept	Values and Dispositions <i>Reflect and enact:</i>	Skills and Aptitudes <i>Ability to:</i>	Knowledge and Understanding <i>Know and understand:</i>
<b><i>Interdependence</i></b>	<p>Compassion for all humanity and concern for social justice globally, now and for the future.</p> <p>Concern for and appreciation of all living things, their needs and interrelationships.</p> <p>Appreciation of the earth and universe a source of inspiration and challenge to human creativity</p>	<p>Reflect critically on one's lifestyle and choices in the light of interdependence.</p> <p>Discern patterns of interrelationship between environment and development topics and between actions and consequences.</p>	<p>The environment and the human condition are inextricably interrelated.</p> <p>Personal understanding of the environment derives from direct experiences which may be spiritual, aesthetic or practical, as well as secondary sources.</p> <p>How people continually impact on the environment and others, as individuals and as part of wider society, from local to global levels.</p> <p>How biological systems operate and support life on earth and are affected by human activity.</p> <p>How major issues such as poverty, consumption, development, health, and loss of species are interrelated.</p> <p>How changes in science and technology have changed the nature and extent of people's effect on the environment.</p> <p>How the economy, society, and the environment are mutually affecting and interdependent.</p>
<b><i>Citizenship, stewardship</i></b>	<p>Willingness to act as a responsible citizen, learning from and working with others to improve situations, with respect to sustainability</p> <p>A sense of responsibility for personal and group actions, and an awareness of their likely impact on natural and human communities, both locally and globally.</p>	<p>Engage in and manage change at individual and social levels.</p> <p>Find information, weigh evidence, and present reasoned argument on sustainable development issues</p> <p>Express and communicate personal responses to social and environmental issues be in a variety of ways</p>	<p>Community action and partnership is necessary to the achievement of more sustainable lifestyles.</p> <p>The connection between personal values and beliefs and behaviour.</p> <p>How the school, community and household can managed more sustainably.</p> <p>The roles and responsibilities of government and business in achieving sustainable development.</p>
<b><i>Future generations</i></b>	<p>Appreciation that the quality of life of future generations is endangered or enhanced by actions we take now.</p>	<p>Consider the future direction of society and the environment, and personal role and contribution to the future.</p>	<p>Conservation, efficiency and restraint in use of resources is necessary to ensure quality of life in the future.</p> <p>How the current quality of the environment is a result of human and natural history.</p>

<b><i>Diversity</i></b>	Respect and value both human diversity - cultural social, and economic - and biodiversity	Weigh impact on diversity of person and group decisions	The maintenance of diversity is necessary to the health and sustainability of natural and human systems.
<b><i>Quality of life and equity</i></b>	Appreciate why equity and justice is necessary to a sustainable society.	Distinguish between wants and needs. Express quality of life in personal terms beyond consumption	There are basic and human needs and that these are universal Inequality, exclusion and injustice persist within and between societies. Quality of life is a broader concept than standard of living.
<b><i>Development, carrying capacity and change</i></b>	Appreciation of the need to develop lifestyles which respect resource and carrying capacity limits.	Envision and distinguish between possible, probable and preferable futures. Question decisions, practices and processes which affect sustainable development issues and critically explore alternatives.	The earth's resources are finite, precious and access to them is unequal. A variety of economic and political forces determine how resources are used and managed. A variety of cultural and social values influence how resources are viewed. The carrying capacity of any environment, and of the earth as a whole, is limited by natural systems and resources. How increasing efforts by people around the world are working towards more sustainable development How business and industry is responding to the challenge of sustainable development.
<b><i>Uncertainty and precaution</i></b>	Appreciation that there are a range of possible approaches to sustainable development issues Appreciation that the limits of knowledge about the environment and sustainable development requires critical thinking about its validity and caution in use. Appreciation of the need for life-long learning in relation to sustainable development and towards a change.	Listen to, critically evaluate, and learn from a range of voices and opinions on sustainable development issues Explore the urgency, need for nature of sustainable development in the local and and global community. Think critically and systemically about sustainable development issues. Respond positively uncertainty and to change in working more sustainable future.	Knowledge about the environment and our relation to it is growing, changing and uncertain.

## E: Specific Learning Outcomes at Key Stages

The following proposed learning outcomes elaborate the generic learning outcomes, shown as 'D' above, in terms of specific outcomes for Key Stages 1-5. They are presented under the seven key concepts of sustainable development listed in 'C' above.

The learning outcomes shown are indicative only; this section does not attempt to give a comprehensive view of all appropriate or possible learning outcomes. Neither is an attempt made to distinguish between knowledge, values and skills although the orientation of each outcome is often clear from its wording.

The Panel recommends that further elaborative work is done at a later stage which would: refine appropriateness of language; provide exemplification; indicate knowledge, skills and values more clearly; and take cognizance of the findings of parallel reports on the curriculum.

### **LEARNING OUTCOMES GROUPED BY KEY STAGE**

By the end of KS 1 pupils should:

1. Interdependence  
understand that living things depend on each other and have a sense that all living things have value; understand that what people do, including their own activities, affect themselves, the places they live, other people and animals and plants; be aware of the natural and human changes that take place in the local built and natural environment and have begun to understand some of the reasons for these changes;
2. Citizenship and stewardship  
know how to care for themselves and others and how to care for their home, school, and local environments; be able to discuss the things they like and dislike about their environment and suggest ideas for looking after it and improving it; understand the rules and expectations that the school community lives by and that these influence the way people behave towards each other and the environment;
3. Needs and rights of future generations  
recognise their own basic needs including shelter, warmth and food; be able to discuss the way they live and the products and services they use; understand that their basic material needs are met by goods and services provided by people using natural resources;
4. Diversity  
know there are many different kinds of plants and animals living in the local environment, and in distant environments; understand that there are different natural environments have different groups of animals and plants; appreciate cultural diversity in the school and locality;
5. Quality of life, equity and justice  
be aware of the things in their lives they value such as family, friends, open spaces; understand the basic difference between needs and wants; have begun to develop a sense of fairness;
6. Sustainable change  
understand the concept of finite resources; have begun to understand the role of the



individual and others in the consumption of resources, and the need for the four 'R's - reduction of consumption, re-use, repair, recycle;

7. Uncertainty, and precaution in action  
understand that different people want to do things in different ways; understand the importance of considering the consequences of their actions.

By the end of KS 2 pupils should:

1. Interdependence  
understand how people, animals and plants are interconnected through natural cycles and ecological/biological systems; understand that human and natural changes in the environment can harm or enhance the ability of different groups of plants, animals and humans to survive and flourish; appreciate the differences or similarities between probable and preferable long term changes to the environment and society;
2. Citizenship and stewardship  
want to learn more about their local and global environment and know how they can care for it and improve it; be able to work with other members of the school community and feel responsible for improving its sustainability; be able to explain how the values and expectations of the school affects their behaviour and how their lifestyles at school and at home depend upon and impact on the environment and other people;
3. Needs and rights of future generations  
appreciate that they have choices in the way that they use products and services and that different choices can affect others and the environment differently; have begun to be able to distinguish between actions and products which are wasteful or more sustainable; understand that some natural resources are finite while others can be used sustainably;
4. Diversity  
understand what is meant by biodiversity in local and global contexts and the importance of maintaining biodiversity at local and global levels; understand and value 'local distinctiveness' in relation to townscape /landscape, economic life and culture, and habitats; know how monitoring the distribution and diversity of species in a habitat can serve as indicators of quality of and change in the environment;
5. Quality of life, equity and justice  
know and understand that basic needs are universal; understand the reasons why there are differences in the extent to which people's basic needs are met, and that these inequalities exist within and between societies;
6. Sustainable change  
have begun to understand the concepts of carrying capacity and limits through for example, studying overgrazing or road capacity; be able to understand how human systems work in terms of simple systems concepts as inputs, outputs, sources, sinks and flows, and consider how they may be managed more sustainably, for example, the house, the school, and the farm; understand and be able to develop indicators for their own lifestyle and community that they can use to monitor sustainability ;
7. Uncertainty, and precaution in action  
understand that people have different views on sustainability issues and these may often be in conflict; be able to listen carefully to arguments and weigh evidence carefully.

By the end of KS 3 pupils should:

1. **Interdependence**  
be aware of the global context within which trade, industry and consumption patterns operate; understand how and why different countries and transnational economic groups have the power to influence social change and the use of the environment from the local to global level; understand the extent of pressures on the earth's natural cycles and natural resources posed by consumption patterns and numbers of people around the world; understand that different ideologies and styles of social and economic development within and across societies impact on the sustainability of the environment and of peoples lives and livelihoods;
2. **Citizenship and stewardship** acknowledge their personal and collective responsibilities in relation to the social, economic and environmental health of their community and value their participation in activities that enhance its sustainability; know how decisions about social, economic and environmental issues are made, that they impact on each other, and how they can be influenced locally and nationally through direct or indirect participation; know how considerations of sustainable development, stewardship and conservation currently affect environmental planning and management;
3. **Needs and rights of future generations**  
accept that they have a responsibility both as individuals and as members of society to act in a way which acknowledges the rights of future generations; be able to explain why wasteful production and disposal is harmful to the environment and why they cannot continue indefinitely; be able to assess the sustainability of their own lifestyle; understand the principles of sustainable living and the ways in which they can make a contribution;
4. **Diversity**  
understand the urgency and importance of protecting global biodiversity and life-support systems; appreciate the nature of changes which have affected economic, cultural and biological diversity in their locality over past generations; be aware of the factors that affect the size and diversity of the population of different species, including humans;
5. **Quality of life, equity and justice**  
have developed a sense of concern for global social justice; understand the differences between quality of life and standard of living; be able to reflect critically on the factors which influence and determine the quality of their own lives as well as those of others;
6. **Sustainable change**  
understand the idea of sustainable consumption at individual and national levels, including the emerging concepts of ecological footprint and environmental space; understand the difference between management of renewable and non-renewable resources, including the application of concepts such as sustainable yield, efficiency and sufficiency; understand the basic differences and tensions between economic growth and broader concepts of development designed to increase human welfare and potential;
7. **Uncertainty, and precaution in action**  
have an informed and positive sense of the urgency and challenges of sustainability; know how different cultures and belief systems influence how the environment and resources are viewed; know how different economic and political forces determine how resources are managed.

By the end of KS 4 pupils should:

1. Interdependence  
be aware of the role of advertising, product innovation and popular culture in promoting different lifestyles and be able to critically consider choices and alternatives in the context of defining needs and wants; evaluate the benefits and drawbacks of the application of scientific and technological developments for individuals, communities and environments in relation to sustainable development; understand the tension between sustainable development based on local production and consumption and the globalization of trade and finance;
2. Citizenship and stewardship  
understand and value the goal of sustainability and the collective decision-making processes required to achieve it; be prepared to work with others in partnership to resolve sustainable development issues; understand how values and beliefs influence behaviour and lifestyles, and how some behaviour and lifestyles are more sustainable than others; understand the rights and responsibilities that are emerging as necessary to achieving a sustainable society, and how they apply to themselves and other groups in the community and wider society;
3. Needs and rights of future generations  
appreciate that the quality of life of future generations is endangered or enhanced by actions taken now; understand that basic needs for a large part of the world's population presently go unmet; be able to analyse the impact of their actions and lifestyle on the environment and society and able to take informed decisions; know that human activity and natural history have combined to shape our current environment and society and understand that restraint in the use of natural resources is necessary to ensure quality of life in the future;
4. Diversity  
have an understanding of the paradox of increased consumer choice and communication and loss of cultural, economic and biological diversity through globalization and advances in technology; be able to reflect critically on and engage in debates and decisions on political, technological and economic changes which impinge on diversity and sustainability such as the uses of biotechnology;
5. Quality of life, equity and justice  
have a clear understanding of the role individuals can play in contributing to greater social justice and equity, and be willing to participate in this process; understand why social justice is an essential part of sustainable development; understand disparities in development, inequalities within and between societies, and the range and complexity of factors that contribute to the quality of life in different places;
6. Sustainable change  
be able to question decisions, practices and processes which affect sustainable development issues and investigate alternatives; know how different sectors of society in the UK and elsewhere, including business, government, local authorities, NGOs and community groups are responding to the challenge of sustainable development including Local Agenda 21 work; be able to discuss alternative forms of scientific, technological, economic, political and social futures in the light of sustainability.
7. Uncertainty, and precaution in action  
be able to think critically, systemically and creatively about sustainable development

issues, solutions and alternatives, through study of examples; understand that there are a range of possible pathways to more sustainable lifestyles and be willing participants in efforts to realise more sustainable futures through life-long learning and informed action; understand the value and use of the precautionary principle in personal, social, economic, scientific and technological decision-making in the light of uncertainty.

By the end of 16-19 phase pupils should:

1. Interdependence  
understand the extent to which the globalization of trade and finance is contributing to the wealth gap; be able to critically evaluate the role of science and technology in the resolution of environmental and sustainable development issues; have compassion for humanity and all life forms; understand the systemic and dynamic nature of the interrelationship between sustainable development issues, thematically (between issues), spatially, (local-global) and temporally (past, present, future);
2. Citizenship and stewardship  
understand the variety of ways in which individuals and groups can actively participate in the promotion of sustainable development, and the implications this has for the social and economic operation of communities; understand basic ethical positions and tensions regarding extending rights to nature and to future generations; be able to justify their own views and positions on ethical issues related to sustainable development; have an understanding of the principles and techniques of institutional and business greening and appreciate the social, economic, and political problems involved at this level in implementing a full greening policy; be familiar with the meaning and methods of capacity building and regeneration at community level through case study;
3. Needs and rights of future generations  
appreciate how and why different cultural groups and different income groups do not necessarily value the rights of future generations in the same way; understand that it is not possible to predict future needs with precision, but that it is necessary and important to be aware of their implications for present action; have a critical and informed understanding of the tools and techniques available to assist sustainable consumption including eco-labelling, sustainability indicators, and green consumer guides;
4. Diversity  
understand the range of causal factors involved in reduction of global biodiversity and recognise the principles underlying good practice in biodiversity maintenance or creation; be able to critically review the various techniques for quantitative and qualitative analysis of biodiversity and their implications on the biodiversity debate; be familiar with arguments for and trends in globalization and localisation in economic activity in relation to the need for a sustainable economy;
5. Quality of life, equity and justice  
understand the difference between measures of standard of living such as GNP and emerging measures of quality of life such as the indicator of sustainable economic welfare (ISEW); understand the concept of social capital and how this relates to equity, sustainability and the cohesion of communities and society; appreciate that not all people and cultures value quality of life, equity and justice in the same way and the issues this raises for realising a more sustainable society; be familiar with emerging initiatives to promote equity and justice such as fair trading and ethical investment, and the role of pressure groups in promoting social and economic change;

6. Sustainable change  
be able to envision and critically assess alternative scientific, technological, economic, political and social futures in the light of their relative sustainability; understand the difference between a linear economy based on non-renewable resources and a cyclical economy based on renewables, and be familiar with trends, problems and progress in this regard; be familiar with the basic principles of sustainable design of physical and living systems and their application, such as transport systems, farming, or housing; understand a number of routes towards sustainability including regulation, incentives, adjustments to market prices to include social and environmental costs such as ecotaxation, and technological and resource efficiency;
7. Uncertainty, and precaution in action  
be able to apply critical thinking to sustainable development issues, including examination of assumptions, power and vested interests, and exploring alternatives; be able to apply systems and creative thinking to sustainable development issues and problems, including discerning complexity, pattern, context, relationship and feedback between factors; understand the concept of cultural change in the shift from the certainties of the modern age to the uncertainties of the postmodern age, and what opportunities this may afford for realising a more sustainable society; be aware of the implications of sustainable development for all areas of their future lives, and as appropriate, their chosen area of academic, vocational or professional interest.

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**PAGE PUBLISHED 28 APRIL 1999**

**PAGE LAST MODIFIED 20 AUGUST 2002**

**WEBSITE LINK:**

<http://webarchive.nationalarchives.gov.uk/20080305115859/http://www.defra.gov.uk/environment/sustainable/educpanel/1998ar/ann4.htm>