

A UK indicator of the impact of formal learning on knowledge and awareness of sustainable development

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Summary

This paper proposes six approaches to developing a UK indicator of education for sustainable development. It outlines the background to these approaches and suggests criteria for deciding the preferred approach / approaches to be recommended to the DfES.

Pages 1 – 6 outline the background to the proposals. The discussion of the six approaches begins on page 7. The criteria for evaluating the approaches are on page 14.

INTRODUCTION

The UK strategy for sustainable development proposes an indicator of the impact of formal learning on knowledge and awareness of sustainable development. Following discussions with Defra, the Sustainable Development Commission has the responsibility of developing this indicator and forwarding proposals to the DfES.

In November 2005 the SDC contracted John Huckle, an ESD consultant, to research the background to ESD indicators; review and extend existing proposals on the form of a possible indicator; and arrive at recommendations to make to government. This paper summarises his findings and will inform a consultation to be held at the DfES on February 13th 2006.

BACKGROUND

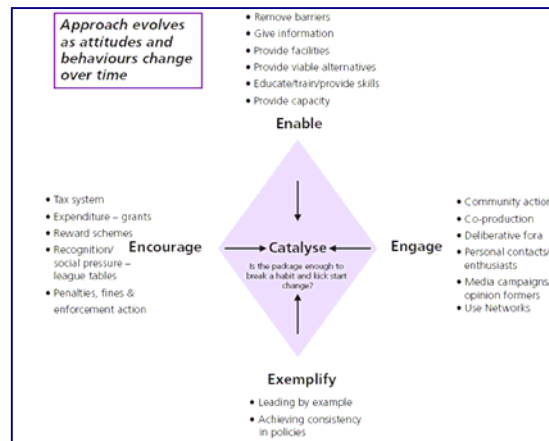
The UK Strategy for Sustainable Development

The UK Government launched its new strategy for sustainable development, *Securing the Future*, in March 2005. It sets out the goal of sustainable development as *enabling all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations*. The strategy highlights four priority areas for action: sustainable production and consumption; climate change and energy; protecting our natural resources and enhancing the environment; and creating sustainable communities and a fairer world.

For each of these areas, the Strategy identifies indicators through which to review progress and, along with other evidence, determine whether the Government is succeeding in its goals or whether it needs to develop different policies and act accordingly. In all, 68 indicators are outlined in Chapter 7 of the Strategy together with related Public Service Agreements and relevant policy statements. These include 20 UK Framework indicators, outlined in *One future – different paths: The UK's shared framework for sustainable development*. This framework is shared by the UK Government and the devolved administrations in Scotland, Wales and Northern Ireland. The UK Framework indicators are intended to cover key impacts and outcomes that reflect the priority areas across the UK.

Within the UK Framework and UK Government Strategy there are several indicators where *it is not yet possible for us to be precise about how they will be measured. For some of these there is already work underway which should enable us to define the indicator, and start reporting progress within a short period. . . . In particular, the Departments for the Environment Food and Rural Affairs (Defra) and for Education and Skills (DfES) are actively seeking to develop an indicator to show the impact of formal learning on knowledge and awareness of sustainable development. Further work is needed on this, but the Government hopes that a suitable indicator will be agreed later in 2005 (Securing the Future, page 22)*. This indicator of sustainable development education is number 48 in the table (pages 168 – 175).

The UK was one of the first countries to establish a set of indicators to review sustainable development (1996) and these were further developed to establish a set of 147 indicators, *Quality of life counts* (1999, updated 2004). The 68 indicators in the



new set build upon this experience and also take account of responses from *Taking it on* – the consultation to develop the new UK sustainable development strategy (2004), which included questions on the future use of indicators. Those selected have been chosen as key measures of impacts or drivers for priorities within the Strategy.

In selecting the new UK Framework indicators, the Government has chosen measures that wherever possible:

- are linked to the purpose and priorities of the UK Framework
- are agreed as high priorities by the UK Government and Devolved Administrations
- have UK coverage (though there are some data constraints)
- have trends available
- highlight challenges, and
- are statistically robust and meaningful

The new indicators are intended to be a select, focused and more manageable set and for the majority, the relevant data is already well established, collected and reported for other purposes. The Government provides information on indicators and reports annually on progress via its [sustainable development website](#). Further development of indicators is anticipated in such areas as ecological footprints; the global impact of UK development; and measures of international sustainable development.

Education for Sustainable Development

Securing the Future states that *government must promote a clear understanding of, and commitment to, sustainable development so that all people can contribute to the overall goal through their individual decisions* (page 16). Chapter 2 (*Helping people make better choices*) states that behaviour changes will be needed to deliver sustainable development but recognises that attitude and behaviour change is a complex subject (*Information alone does not lead to behaviour change or close the so-called attitude-behaviour gap* (page 25)). It goes on to propose a new active approach to changing habits based on research; an approach that is light on regulation and focuses on the need to enable, encourage and engage people and communities in the move toward sustainability, while recognising that Government should lead by example. A diagram sets out what the elements under each of these headings could comprise.

Education is seen as an enabler of attitude and behaviour change and to have a similar role in relation to sustainable development to that it has in promoting healthy lifestyles or civic renewal. A behaviour change forum is being established across Government departments and such initiatives as Community Action 2020 (Together We Can in England) will give people new opportunities to engage in active citizenship and practice more sustainable behaviours.

The title for section 5 of Chapter 2 sums up the role of education as ‘forming habits early’. Here we learn that the DfES’ Five Year Strategy for Children and Learners seeks to make every school an environmentally sustainable school that teaches about sustainable development through the curriculum and by example. The section also mentions the DfES Sustainable Development Action Plan; the development of a Sustainable Development Framework for Schools; rewards for pupils and schools who take part in community projects; Building Schools for the Future; ESD strategies from the LSC and HEFC; and a Global Gateway to increase awareness and use of resources on the global dimension.

The DfES published its Sustainable Development Action Plan (SDAP) (download) in 2003. In his foreword, the Secretary of State set out his vision which includes *making sure that children, young people and adult learners are aware that what they do in their day to day lives has huge implications for everyone in this country and in the world at large . . . ensuring that people engaged in learning are given the inspiration to think about and really appreciate their role as world citizens* (SDAP, pp. 2 –3)

The action plan is organised around four key objectives:

1. *ESD: all learners will develop the skills, knowledge and value base to be active citizens in creating a more sustainable society.*
2. *The environmental impact of the Department and its partner bodies: we will pursue the highest standards of environmental management across all properties owned and managed by the Department and its associated bodies.*
3. *The environmental impact of the educational estate: we will encourage and support all publicly-funded educational establishments to help them operate to the highest environmental standards.*
4. *Local and global partnership activity: we will make effective links between education and sustainable development to build capacity within local communities.*

Under each of these objectives issues to be addressed are identified, actions to be taken over the next two years are listed, and partners are indicated. The plan brings together the environmental management and ESD agendas, sets overall goals, but emphasises the importance of partnerships and new thinking at the local level. An advisor (Jake Reynolds) is currently seconded from the SDC to the DfES to progress the plan.

The proposed indicator (the impact of formal learning on knowledge and awareness of sustainable development) could with some modification become a measure of the extent to which the first objective of the SDAP is realised. Given the significance of the SDAP for educational institutions at all levels, and for teachers and learners, it is

proposed that **the indicator should measure the extent to which all learners have developed the skills, knowledge and values base to be active citizens in creating a more sustainable society.**

This indicator should measure relevant learning at all three stages of education, primary, secondary and tertiary/higher and its design should take account of curriculum requirements and guidance on ESD provided by the QCA, the Learning and Skills Development Agency, the Learning and Skills Council, and the Higher Education Funding Council for England.

While the focus of this consultation paper is largely on the primary and secondary (school) stages, the approaches suggested can equally well be applied to the tertiary stage. Time constraints prevented the writing of tests (appendices) appropriate to learners in further and higher education.

THE FORM OF THE PROPOSED INDICATOR

In his notes on indicators, Stephen Sterling (2004) distinguishes between **technical and resonant indicators**. Technical indicators are 'objective' indicators involving measurement and preferred by decision makers. Like the UK framework indicators (page 1) they provide a benchmark and are comparable. Resonant indicators are chosen by a community and reflect their perception and concerns. They are more likely to inspire ownership and engagement but may not lend themselves to measurement and comparison with other sets, not least because they are likely to be qualitative rather than quantitative. The indicator proposed is technical but it may be approached and generated in a way that encourages learners' and community engagement.

Sterling further distinguishes between **performance and process indicators**. Performance indicators measure outputs (of ESD learning) and tend to be of the technical kind. Process indicators measure the quality of ESD learning processes, rather than the implementation of learning goals. The proposed indicator is a performance indicator but may be approached and generated in a way that encourages good process.

Clearly the possible approaches to generating a technical, performance indicator of the outcomes of ESD learning in the formal sector are fraught with issues of interpretation and application. Who is to decide what skills, knowledge and values base active citizens require to create a more sustainable society? How are such outcomes to be measured objectively? What theoretical assumptions are different approaches making and/or ignoring?

EXISTING DEVELOPMENTS

Council for Environmental Education Policy Forum, February 2004

This meeting considered the role of learning in the UK SD Strategy. Groups were asked to discuss the appropriateness of process, output and outcome indicators and identify potential indicators for learning. Contributors agreed new indicators were necessary; considered that multiple indicators would be required to reflect the

contribution of learning; and suggested a number of particularly promising indicators with potential for further development. Those relating to formal learning are:

- *Proportion of pupils involved in developing their class's indicators of sustainable development*
- *Number of people involved in developing local authority indicators of sustainable development*
- *Proportion of schools meeting an ESD standard (need to link to Ofsted framework and possible self-assessment guidelines)*
- *Evidence of action by citizens*
- *Evidence of individual knowledge of **why** certain actions on sustainable development are important*

Jake Reynolds's initial proposal

In Autumn 2005 Jake Reynolds circulated a number of key people in the ESD community with a proposal to base an ESD indicator on existing and proposed new items in the questionnaire, used with year 9 pupils, by the NFER longitudinal study into citizenship education. The proposed additional items relate to aspects of pupils' attitudes, behaviours, influences, and experiences at school considered relevant to sustainable development (see citizenship survey approach, page 00).

Responses to this proposal (respondent's initials) suggested that:

- a) since there is no consensus on sustainable development it is not the role of education to teach learners (assume) what it is (LG/CEE). It is not a body of knowledge that can be taught by experts to passive learners who then apply it to living differently. Rather it is a process of social learning in which teachers and learners should actively participate (BS & PV). One respondent (LG/CEE) expresses this clearly: *the human relationship with nature is co-evolutionary (society adapts to its environment, the environment responds to human activity and both shift over time) and so SD cannot possibly mean an end state that can be achieved by determining specific behaviours in the present. It can only be a way of describing an adaptive approach to managing human/environment co-evolution. Sustainability as a goal, therefore, is a capacity of human beings to continuously adapt to their non-human environments (and to uncertainty, complexity and risk) by means of social organisation. . . . Indicators will need to focus on our capacity to continuously adapt (eg through life-long learning; creativity; critical skills; dealing with complex, controversial issues)*
- b) the indicator should measure education for sustainable development rather than education about sustainable development. It should not seek 'right' answers but evidence of the learner's ability to apply relevant knowledge, skills and values in making judgements and taking informed action. (BH & CJ). Questions designed to measure the impact of learning on knowledge and understanding should be open ended, require problem solving and systems thinking abilities, and be based on a logical framework (BH).
- c) the focus of the proposed indicators is knowledge and awareness so questions should focus on knowledge and understanding rather than attitudes, behaviour,

and lifestyle (SP, VE). There is a need to capture causality (how formal education shapes knowledge and understanding of SD or sustainability literacy) (SP).

- d) sustainable development is more about citizenship than individual behaviour. The indicator should focus on participation and community rather than behaviour and the individual (DEA).
- e) the indicator might be confined to knowledge, skills and attitudes, since there is already an indicator of community participation. DfES *Every Child Matters* framework relevant in the context of participation (CJ).
- f) questionnaires that require learners to report their attitudes, behaviours and influences are fraught with problems. Respondents are easily led (TJ), will too readily agree unless questions are much better prepared, and their reported behaviours may be due to factors other than learning (PV). Responses to such questions do not prove formal education is the cause of these responses and the links between knowledge, attitudes and behaviour are far more complex than the questions assume (BS). Learners might offer 'right' answers to questions probing attitudes without having ever heard of sustainable development (BS). The questions as written display a strong social class bias (SP).
- g) there is value in linking the indicator to existing curriculum requirements (M?) or what pupils actually learn through the overt and hidden curriculum (BW). The key concepts outlined by the SDEP are relevant (BS, CJ). Geography seeks to be an effective vehicle for ESD (DL). Some advised closer attention to the first objective of the DEfS action plan: *All learners will develop the skills, knowledge and values base to be active citizens in creating a more sustainable society* (DEA).
- h) the indicator should cover all stages of formal education (CS, SP) and should monitor the extent as well as the impact of ESD (JP).
- i) the term sustainable development should not be avoided. It has currency and can be presented in ways that are accessible and politically neutral (SP). Others agreed that the term sustainable development should not be used in the questions (DEA).
- j) any indicator needs to reflect a high level of sustainability literacy. Some of the proposed questions may not do this eg. those that promote recycling rather than an overall reduction in production and consumption (SP).

UN Decade of ESD and UNECE Strategy for ESD

The United Nations has designated 2005 – 2014 as the Decade of Education for Sustainable Development with UNESCO as the lead agency. Governments around the world are invited to use the Decade to integrate ESD into their national educational strategies and action plans at all appropriate levels.

The United Nations Economic Commission for Europe (UNECE) adopted a strategy for ESD at Vilnius in 2005. This seeks to introduce SD into all forms and levels of education and will use a time frame and indicators to assess the implementation of the strategy. UNECE has established an expert group on indicators that informs the steering committee. It has already met twice and should complete its work by May 2006. UNESCO has a representative on the expert group and it is hoped that the UN Decade, the UN Commission for SD, and the UNECE Strategy for ESD will share common indicators. The European Eco Forum (an NGO coalition) is represented on the UNECE expert group by Paul Vare of Learning South-West. Stephen Leman from the DfES is also a member.

To date the group has considered the nature and purposes of indicators and distinguished between checklist, input and output indicators. It has considered a wide range of draft indicators relating to the evaluation of the UNECE strategy, and is now engaged in eliminating some and refining others (Download report with draft indicators, November 2005). Within its initial list the indicators most relevant to the proposed UK indicator are those relating to promoting SD through formal, non-formal and informal learning. Here 4 quantitative and 7 qualitative indicators were initially listed (Background paper, 30.08.05). The former are largely about the proportion of hours / courses devoted to ESD; the latter include such items as *education is learner-centred, optimistic, forward-looking and orientated to understanding, preventing and solving problems*.

SIX POSSIBLE APPROACHES

Before outlining the six suggested approaches it should be noted that the author rejected approaches based on examinations such as the GCSE. Communication with the QCA (JW) suggested that there was no guarantee questions focussing on SD could be set each year, nor that a representative sample of learners would answer such questions. Approaches based on market research or opinion poll data were also rejected but might repay further consideration should the consultation consider it worthwhile.

1. The sustainability literacy approach

Indicator **The percentage of learners who attain the required level of sustainability literacy.**

Sustainability literacy is a concept developed by the Forum for the Future's Higher Education Partnership for Sustainability. A sustainability literate person will be able to:

- *Understand the need for change to a sustainable way of doing things individually and collectively;*

- *Have sufficient knowledge and skills to decide and act in a way that favours sustainable development*
- *Be able to recognise and reward other people's decisions and actions that favour sustainable development* (Forum for the Future, 2004; Parkin, 2005)

It is possible to recognise seven related components of sustainability literacy and specify the expected level of competence in each component at each key stage of education. Learners who show evidence of competence in at least FIVE components any key stage would be judged to be sustainability literate.

Appendix 1.1 (page 15) lists the seven components of sustainability literacy and uses these to derive attainment targets for KS2 and KS4. An attainment target should also be developed for the tertiary phase.

The guidance provided by the Panel for ESD (Sterling, 1998) has been used to map the expected knowledge, skills and values at each key stage against the seven components of sustainability literacy. The resulting assessment grids (not included due to length, but available on request) informed the writing of tests for sustainability literacy at KS2 and KS4 (see Appendix 1.2, page 17)). An assessment grid and test for the tertiary phase has not yet been developed.

Advantages

The approach draws on an established concept that has some currency in higher education. It relates to other familiar concepts in ESD such as political literacy, social literacy, environmental literacy, action competence.

The approach draws on established guidance provided by the Panel for ESD and developed on the QCA ESD website.

The approach reflects NC assessment with attainment targets and key stage tests that are familiar to teachers.

Disadvantages

Marking schemes for the KS tests have not yet been developed and may prove problematic (SD a discursive concept).

Tests will require (paid?) marking by individuals with ESD expertise.

Some will regard the tests as too prescriptive (see action research approach).

2. The sustainable schools approach

Indicator 2: Percentage of pupils that are able to relate activities carried out in school to key themes of sustainable development and can recognise the values, skills and knowledge that are relevant to taking considered action in these areas.

The DfES is currently developing a framework, web site and self-evaluation tool for sustainable schools. These build on the established ethos of care in most schools by further encouraging them *to care for themselves; care for others, across cultures, distances and time; and care for the environment, both far and near*. Such care is encouraged through what is learnt in classrooms; through how the school is organised; and through learning with the community. Care brings respect and responsibility and

these in turn promote good behaviour and achievement. The sustainable school address issues of concern to its pupils in the context of sustainability and develops relevant knowledge and skills through classroom and community based projects.

The DfES framework suggests three related routes to learning (classroom, school organisation, community) and eight related sustainability topics for learning (food and drink; energy and water; travel and traffic; purchasing and waste; buildings and grounds; inclusion and participation; local well-being; and the global dimension).

The framework has been used to design an objective test for Year 9 pupils (Appendix 2, page 28)). This assesses how well they can associate activities carried out in schools with the routes to learning and topics for learning in the framework. It also tests whether they can recognise, from lists provided, the values, skills and knowledge that a number of imaginary pupils would need to address SD issues that concern them. Tests for pupils / students of other ages might be developed.

Advantages

The test is based on the DfES framework and encourages good practice in schools. The test can be objectively marked (but some themes and routes overlap). There is much scope to change the 8 examples on page 1 and the four examples on page 3 (Appendix 2).

Disadvantages:

It tests pupils' ability to recognise values, skills and knowledge relevant to becoming active citizens for SD rather than their acquisition of values, skills and knowledge.

3. The citizenship survey approach

Indicator 3: The percentage of pupils who report knowledge, attitudes and activities relevant to active citizenship for a sustainable society in a questionnaire used by the NFER study into citizenship education.

The NFER currently runs a citizenship education study to assess the effects of the introduction of citizenship education in schools on the knowledge, skills and attitudes of young people, 11 – 16 ([see relevant NFER web page](#)) The study uses pupil, teacher and school questionnaires, along with school case studies, and as suggested above (page 6) the Yr 9 questionnaire has the potential (particularly with additional items) to provide an ESD indicator. Appendix 3, (page 33) is an analysis of this questionnaire with suggestions as to what items would need to be added.

Advantages:

The approach draws on an established study with a ready-made route to relevant data. Provides a model of how ESD might link with citizenship education.

Disadvantages:

The ten year study runs only until 2009. Extension is uncertain so this approach might yield two years data at best. Not possible to add significant new content as this would unbalance questionnaire and require more than 45 minutes of classroom time.

The cautious response to this approach from the ESD community when raised by Jake Reynolds's in 2005 (page 6).

4. The action research approach (or sustainable schools approach 2b)

Indicator 4: The percentage of learners who have successfully taken part in an action learning designed to explore ways of creating a more sustainable society.

Action research, as a form of social or community learning, is well established in ESD. Through repeated cycles of action and reflection, communities evaluate and refine the knowledge, skills and values that they find useful in moving them towards forms of social organisation they themselves agree to be more sustainable. Such action research requires teachers or facilitators with ‘expert’ knowledge, but this is always subject to rejection or revision by the learners themselves as they evaluate its usefulness alongside ‘local’ knowledge (see for example [RTPI, 2004](#)).

The action research approach is reflected in the suggestion at the CEE Forum, and by the European Eco Forum, that a sound open-ended indicator would be *the number of groups of learners who have discussed and developed their own set of indicators of sustainable development*. The development and use of these indicators might be part of action learning project with the community, designed to tackle some issue of community concern and at the same time foster community involvement and civic renewal.

This approach has also been labelled ‘sustainable schools approach 2b’ since action research projects, whether within schools or involving local and/or distant communities, provide a means of assessing the learning taking place. They provide both a means of caring for self, others and the environment, and a means of focussing upon and assessing the resulting learning.

The approach answers Bill Scott’s plea that indicators be based on open-ended rather than prescriptive learning.

There is a need for indicators that are beyond attendance; beyond qualifications; beyond content (though knowledge is important) and beyond experts (having to know exactly what others know, otherwise it doesn’t count as knowledge). We need to take seriously people’s experience and avoid gratuitous use of judgemental absolutes of right/wrong. (Scott, 2005a)

I’m uneasy with such sentiments (those shaping the UN Decade of ESD) – if I read them literally – because they seem to reflect the over-confidence that pervades the sector, and because the UN agencies tend to assume that learning is only important after experts have decided what it is that should be learned. But perhaps I am the only one here who doesn’t know what these ‘principles, practices and behaviours’ ought to be? The key role for learning seems (to me) to be to develop learners’ ability to make sound choices in the face of the inherent complexity and uncertainty of the future. Such an approach gives people a central role in setting agendas for both learning and action, and values the contribution that different perspectives bring to this. Reassuringly, what people learn isn’t always what others try to teach, which is why people, and what they learn, are crucial to sustainable development a social learning process of improving the human condition.. (Scott, 2005b)

How might participation in social learning or action research be monitored and evaluated? How might such participation contribute to or form an indicator? Ofsted might collect relevant data as part of a revised inspection framework. The DfES self-evaluation tool for sustainable schools might yield relevant data. Existing eco-schools and the 'greener' colleges / universities might provide some answers and there may be potential within the coursework required by some existing examinations. Government might be persuaded to develop some form of recognition / accreditation for involvement in community action for sustainability under the Together We Can initiative.

Appendix 4 (page 36) is a framework for prompting and assessing learners' accounts of an action research project they have carried out in school (college / university). The framework is written to accommodate projects carried out in school (college, university) with or without involvement of the local and/or a distant community. Clearly the framework needs to be refined and a marking schemes for such accounts devised for learners at different stages of formal education.

Advantages:

Builds on established theory and practice and allows for open-ended learning.
The approach contributes to community participation and civic renewal.
The approach may encourage links with distant communities (global dimension).

Disadvantages:

The lack of a standard framework and forms of accreditation for such projects.
No established monitoring of the extent of such learning within educational institutions.

5. The frame of mind approach

Indicator 5: The percentage of learners who have developed sustainability as a frame of mind

Michael Bonnett (2004) argues that education should develop sustainability not as an aspect of policy but as a frame of mind. Learners are more likely to become active citizens capable of creating a sustainable society if they have developed a love of themselves and the rest of the human and non-human nature that sustains them, than if they are taught the knowledge, skills and values prescribed by policy makers.

As a frame of mind sustainability is essentially about coming to terms with realist nature: the structures, processes and causal powers that are constantly at work in the bio-physical world. Such nature provides the objects of study of the natural sciences and conditions the possible forms of human intervention in biology or interaction with the environment. It is the nature to whose laws we are always subject, even as we harness them to human purposes and whose processes we cannot escape nor destroy (Soper, 1995).

Developing sustainability as a frame of mind requires ESD to develop:

1. an understanding of self and others within nested bio-physical and social systems (a systemic or holistic worldview);

2. an understanding of the role of realist nature in sustaining human physical and mental health and well-being;
3. an ability to evaluate whether or not ecological, environmental and social relations are sustainable and likely to contribute to the continued co-evolution of human and non-human nature;
4. spirituality or a sense of 'awe and wonder' regarding a realist nature that lies largely beyond our 'authorship, analysis and management';
5. a knowledge of other cultures and alternative lifestyles that incorporate and reflect sustainability as a frame of mind;
6. a love of self, others and the rest of nature that comes from recognising their unique potentials, their co-dependency, and their roles in meeting each others' needs and enabling each others' development;
7. the contentment, self respect, and responsibilities, that come from loving and caring for self, others, and the rest of the natural world;
8. a critical understanding of dominant social structures and processes, the ways in which these shape people's thinking about themselves and the world, and the ways in which they hinder the development of sustainability as a frame of mind.

Paul Maiteny (2005) argues that such ESD is needed as a response to learners' anxieties, fears, and alienation from nature, that fuel modern forms of consumerism and unsustainable development. Only when ESD addresses the psycho-emotional dimensions of learning and motivation, alongside the cognitive dimension, will it begin to bring about real change to more sustainable forms of behaviour.

The eight objectives above have been used to design a test to measure whether Year 11 pupils have acquired sustainability as a frame of mind (Appendix 5, page 37). Tests for other ages / stages could be developed.

Advantages:

The approach has a firm philosophical foundation and focuses on a frame of mind or orientation towards nature rather than outcomes determined by policy makers. It encourages teachers to address the psycho-emotional dimensions of learning. It can accommodate the emerging DfES approach to sustainable (caring) schools.

Disadvantages:

It will be difficult to agree on a marking scheme and find knowledgeable markers sympathetic to the approach.
Somewhat distant from existing practice.
Some will see the approach as ESD adopting 'new age' philosophy or romanticism.

6. The dilemma approach

Indicator 6: Percentage of learners having the skill to match imaginary characters' decisions to the knowledge and values that is likely to have prompted such decisions.

In searching for an objective test of learners' skills, knowledge and values relevant to active citizenship for sustainability, it was decided that a dilemma exercise might be

appropriate. Do learners have the skill to match imaginary characters' decisions to the knowledge and values that is likely to have prompted such decisions?

Dilemmas might focus on decisions taken by young people as consumers, citizens/voters, or workers. Appendix 6 (page 40) presents a dilemma for Year 11 pupils based on a consumer decision. Dilemmas for learners of other ages could be written.

Advantages:

Pupils are likely to find the dilemmas interesting and relevant to their own lives. May be possible to integrate the dilemma with classroom teaching and mark it objectively (a software or web based resource may be appropriate).

Disadvantages:

Selection of relevant knowledge and values is somewhat arbitrary. Answers are not really objective and exercise could be seen to lead pupils to 'right' answers.

EVALUATION OF APPROACHES

On page 14 is a table that suggests eight criteria whereby the six approaches might be evaluated. These criteria and others are likely to feature prominently in discussions at the consultation meeting to be held on February 13th.

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References:

- Bonnett, M. (2004) *Retrieving Nature: education in a post-humanist age*, Blackwell
- European Eco Forum (2005) 'Statement to the First Meeting of the Expert Group on ESD Indicators, Ede, Netherlands, September 2005'.
- Forum for the Future (2004) *Sustainability literacy: knowledge and skills for the future*, Report of a consultation workshop.
- Mainteny P. (2005) 'Education for sustainability and development: psycho-emotional blocks and catalysts', *Development Education Journal*, 11/2, pp. 1 - 4
- Parkin, S. (2005) 'Sustainable development: challenge or opportunity', QCA Futures (download from QCA website)
- RTPI (Royal Town Planning Institute) (2004) *Education for Sustainable Development: a manual for Schools*
- Scott, W. (2005a) Presentation to Teachers in Development Education (TIDE) reported in European Eco Forum 2005, op. cit.
- Scott, W. (2005b) 'ESD: what sort of Decade? What sort of Learning?', Keynote address to UK launch of Unesco Decade for ESD, ULIE, 13.12.05
- Soper, K. (1995) *What is Nature*, Blackwell
- Sterling, S. (1998) *Education for Sustainable Development in the Schools Sector, A Report to the DfEE/QCA from the Panel for Education for Sustainable Development*
- Sterling, S. (2004) 'A few notes on indicators' (personal communication)

Criteria V	Approach >	Sustainability literacy	Sustainable schools	Citizenship survey	Action Research	Frame of Mind	Dilemma
Validity – the approach measures the extent to which learners have acquired the skills, knowledge and value base to be active citizens in creating a more sustainable society							
Reliability – if repeated at intervals the approach yields measures that can reliably be compared and will show trends over time.							
Simplicity – the approach is understandable and meaningful to learners and the wider community. It encourages their engagement with issues of SD.							
Objectivity – the approach is free of bias. The tests that yield the indicator can be set and marked objectively in ways that eliminate the subjectivity of the writer and marker.							
Cost – the approach can yield an indicator at reasonable cost. The costs of administering and marking the test that yields the indicator are not excessive.							
Equal opportunities – the approach allows all learners to show evidence of relevant skills, knowledge and values, irrespective of race, class, gender or disability.							
Good practice – the approach reflects and encourages good practice as regards sustainable schools and learning and teaching in ESD.							
Government policy – the approach reflects Government policies on education and sustainable development.							

Appendix 1.1

Sustainability Literacy Attainment Target

This attainment target is based on seven related components of sustainability literacy:

1. Understanding of the principle of sustainable development
2. Understanding of the need for sustainable development
3. Recognition of features of a sustainable community
4. Understanding of the widely shared values and interests that underpin sustainable communities
5. Ability to recognise and reward the actions of individual and organisations that favour sustainable development
6. Acquisition of skills needed to decide and act in ways that favour sustainable development, and
7. Understanding of key concepts of sustainable development.

It specifies the expected level of competence in each component at each key stage. Learners who show evidence of competence in at least **FIVE** components at any key stage are judged to be sustainability literate.

By the end of **KEY STATE 2** learners should be able to:

- Explain the meaning of the term ‘sustainable’ as applied to development once they have answered prompting questions about resources and basic needs.
- State the need for sustainable development by using **TWO** related terms in appropriate contexts.
- Recognise and justify **TWO** features of a sustainable community.
- Select and justify a school rule and a community law that they would encourage sustainable development. They understand that such rules and laws take account of the interests of present and future humanity and other living things
- Describe the actions of **TWO** agents (an individual and an organisation) and explaining why these are likely to encourage sustainable development. They can also describe **ONE** thing they themselves have done, or could do, to reward an agent that they themselves believe to be encouraging such development.
- Describe and justify a skill developed during a project to develop understanding of such development.
- Apply **ONE** of six concepts of sustainable development to **ONE** of six given topics in a way that demonstrates understanding of the concept.

By the end of **KEY STAGE 4** learners should be able to:

- Define sustainable development in a way that draws attention to TWO of its five dimensions (ecological, economic, social, cultural and personal);
- Explain the need for sustainable development in terms of providing for the basic needs of present and future generations whilst also conserving the ecological resources and services on which they depend;
- Recognise and justify TWO features of a sustainable community;
- Explain why TWO values that they propose should encourage sustainable development; and state that such development serves the interests of present and future humanity and other living things;
- Describe the actions of THREE agents, each of a different type, and explain why these actions are likely to encourage sustainable development. Outline TWO things they themselves could do to reward an agent that they believe to be encouraging such development.
- Describe THREE skills, of different kinds, developed during a school and/or community based project and explain how ONE of these skills can help people make decisions and act in ways that encourage sustainable development;
- Apply TWO key concepts of sustainable development to ONE topic that may affect their daily lives in a way that reveals understanding of both the concepts and the topic.

Appendix 1.2

Test to measure Sustainability Literacy at KS2

Question 1 (sustainable development)

People depend on resources to meet their needs.

Name ONE resource that we obtain from our environment that is limited in amount (finite or non-renewable).

Name ONE resource that we obtain from our environment that is renewable, provided we use it in sensible ways.

Why are some people concerned about the ways in which we are using the resources that our worldwide environment supplies?

Name ONE basic need that all people have.

Why do some people want the world's leaders to do more to meet people's basic needs?

Change that improves people's lives is called development.

Sustainable development meets everybody's basic needs and conserves the earth's resources.

Why is it called sustainable development? (What does the word sustainable mean?)

Question 2 (recognising the need for sustainable development)

Read the following list of words or phrases. They all have something to do with why the world's people should seek more sustainable forms of development.

Limits, carrying capacity; conservation; finite resources; biodiversity; economic growth; production; consumption; pollution; wants and needs; population; lifestyle; technology; trade; politics; poverty; conservation; quality of life; systems.

Select ONE of these words or phrases. Write a sentence that includes the word or phrase you have selected. The sentence should give one reason why the world's people need to adopt more sustainable forms of development.

Now select ONE OTHER of the words or phrases. Write a sentence that includes the second word or phrase you have selected. The sentence should give one other reason why the world's people need to adopt more sustainable forms of development.

Question 3 (recognising sustainable development)

You life is affected by the many communities in which you live: home, school, neighbourhood, village, town, country, European community, global community. Communities meet people's needs and shape the quality of their lives.

How would you recognise if a community was developing in sustainable ways?
Suggest TWO things you would notice?

1

2

Why do you think these TWO things provide evidence of sustainable development?

1

2

Question 4 (moral and social responsibility – values)

Values are things that people really care about in their lives. They are likely to affect their behaviour.

Values like tolerance and fairness are reflected in school rules and community laws.

Give an example of a SCHOOL RULE that may encourage pupils to behave in a way that encourages sustainable development. Explain why you think it would have that effect.

Give an example of a LAW that could be introduced in the national, European or international community, that would encourage citizens to behave in a way that encourages sustainable development. Explain why you think it would have that effect.

Social responsibility is about people behaving in ways that takes account of others' interests.

Sustainable development requires rule and laws to take account of which other people's interests?

Who or what else (apart from people) may benefit from rules and laws that encourage sustainable development?

Question 5 (knowledge of individual and collective action)

We can all make decisions and take action that may encourage more sustainable forms of development.

Name an individual and describe ONE thing that she or he has done to encourage sustainable development. Explain why you think that this decision or action is likely to encourage sustainable development.

Name of individual

Action he or she has taken

The reason why this action is likely to encourage sustainable development

Businesses, governments, community groups and charities can also encourage sustainable development. Name an organisation and describe ONE thing that it has done to encourage sustainable development. Explain why you think that this decision or action is likely to encourage sustainable development.

Name of organisation
Action the organisation has taken

The reason why this action is likely to encourage sustainable development

Now describe ONE thing that you yourself have done or could do to reward an individual, OR an organisation that you believe is encouraging sustainable development.

Question 6 (intellectual, communication and action skills)

Skills are abilities to do things. There are different kinds of skills:

- Intellectual skills are things you do ‘in your head’, such things as handling information, reasoning, and problem solving
- Communication skills to do with talking and listening, such things as expressing opinions, engaging in debate, and recognising other people’s interests
- Action skills to do with co-operating with other to get things done.

Think about a project you have done in school to help you understand sustainable development. This probably involved caring for the environment, caring for others, and/or caring for you yourself. It may have involved you working in the local environment with the local community. It may have involved a link with another community elsewhere in the world.

Briefly describe the project

Describe ONE skill you developed during this project

What type of skill was it? (intellectual, communication or action)

Question 7 (understanding of ESD key concepts)

The following six **topics** are related to sustainable development: climate change; fair trade; happiness; local languages; nuclear power; the United Nations.

The following six **concepts** that are associated with sustainable development help us to understand such topics:

- **Interdependence.** Everything is related to everything else.
- **Citizenship and stewardship.** Citizens have rights and responsibilities. They should care for each other and the environment as stewards.
- **Needs and rights of future generations.** People who are not yet born have needs and rights that we should respect.
- **Diversity.** The diversity of plants and animals, and of cultures is valuable and worth conserving.
- **Quality of life, equity and justice.** Quality of life is different from quantity of life or standard of living. People's quality of life depends on a healthy environment and a fair distribution of economic wealth.
- **Uncertainty, and precaution.** We never fully understand what will happen when we use the environment in new ways. It is therefore best if we act with caution.

Select ONE of the topics and ONE concept that you think helps you to understand the topic.

What is the topic?

What is the concept?

How does the concept help you to understand the topic?

Question 8 (ESD delivery in the formal sector)

Which subjects in school have taught you most about sustainable development?

In what other ways has school taught you about sustainable development, apart from through learning subjects in the classroom?

Do you agree or disagree with the following statement: schools are providing young people with the knowledge, skills and values that they need to help communities develop in sustainable ways?

Tick one of the following:

Strong agree / Agree / Disagree / Strongly disagree / Don't know

Finally, think about how easy or difficult it was to answer the first eight questions.

Now suggest ONE way in which your school might improve so that pupils have an even better knowledge and understanding of sustainable development.

Test to measure Sustainability Literacy at KS4

Question 1 (sustainable development)

The communities in which we live are constantly changing. If this change brings benefits for people it is called development.

What do you understand by sustainable development?

(Clue: something that is sustainable can last for a very long time. So what is it about sustainable development that means it can last for a long time?)

Question 2 (recognising the need for sustainable development)

Do you believe that communities should try to develop in sustainable ways?

Answer YES or NO.

Explain why there is a need for sustainable development OR explain why there is no need for sustainable development.

Question 3 (recognising sustainable development)

How would you recognise if a community was developing in sustainable ways?

Suggest TWO things you would notice?

1

2

Why do you think these TWO things provide evidence of sustainable development?

1

2

Question 4 (moral and social responsibility – values)

Values are things that people really care about in their lives. They are likely to affect their behaviour.

What values are likely to lead to sustainable forms of development?

Social responsibility is about people caring for others and acting in ways that take account of other's interests.

Sustainable development requires us to care for and take account of which other people's interests?

Who or what else (apart from people) may benefit from sustainable development?

Question 5 (knowledge of individual and collective action)

Individuals, businesses, governments and community organisations can all make decisions and take action that may encourage more sustainable forms of development.

Name an individual and describe some action that she or he has done to encourage sustainable development. Explain why you think that this decision or action is likely to encourage sustainable development.

Name of individual

Action he or she has taken

The reason why this action is likely to encourage sustainable development

Now do the same for a business, a government, and a community organisation.

Name of business

Action the business has taken

The reason why this action is likely to encourage sustainable development

Name of government
Action the government has taken

The reason why this action is likely to encourage sustainable development

Name of community organisation
Action the community organisation has taken

The reason why this action is likely to encourage sustainable development

Now describe TWO things that you yourself could do to reward an individual, OR a business, OR a government, OR a community organisation that you believe is encouraging sustainable development.

1

2

Question 6 (intellectual, communication and action skills)

Skills are abilities to do things. There are different kinds of skills:

- Intellectual skills to do with such things as handling information, reasoning, and problem solving
- Communication skills to do with expressing opinions, engaging in debate, and recognising other people's interests
- Action skills to do with co-operating with other to get things done.

What is the most important single project you have carried in school, in the community, or in both the school and the community, that has increased your knowledge and understanding of sustainable development?

Describe the project briefly here.

Describe ONE intellectual skill involved in this project.

Describe ONE communication skill involved in this project.

Describe ONE action skill involved in this project?

Now explain how ONE of the skills you have described can help people make decisions and act in ways that encourage sustainable development.

Question 7 (understanding of ESD key concepts)

The following ten **topics** are related to sustainable development and may affect your everyday life: the European Union, fair trade, gender equality, global warming, healthy food, the internet, migration, planning, tourism, and waste.

The following six **concepts** that are associated with sustainable development help us to understand such topics:

- Interdependence of society, economy and natural environment, from local to global;
- Citizenship and stewardship – rights and responsibilities, participation, and cooperation
- Needs and rights of future generations
- Diversity – cultural, social, economic and biological
- Quality of life, equity and justice
- Uncertainty, and precaution in action.

Select ONE topic and TWO concepts from the lists above.

Select concepts that help you understand the topic you have selected.

Name the topic you selected.

Now name the first of the two concepts that you selected.

How does this concept help you to understand the topic?

Now name the second of the two concepts that you selected.

How does this concept help you to understand the topic?

Question 8 (ESD delivery in the formal sector)

Which subjects in school have taught you most about sustainable development?

In what other ways has school taught you about sustainable development, apart from through learning subjects in the classroom?

Do you agree or disagree with the following statement: schools are providing young people with the knowledge, skills and values that they need to help communities develop in sustainable ways?

Tick one of the following:

Strong agree / Agree / Disagree / Strongly disagree / Don't know

Finally, think about how easy or difficult it was to answer the first eight questions.

Now suggest ONE way in which your school might improve so that pupils have an even better knowledge and understanding of sustainable development.

Appendix 2

YEAR 9 SURVEY OF SCHOOL PUPILS LEARNING FOR SUSTAINABLE DEVELOPMENT.

This survey is to find out whether the schools you have attended have helped you to develop the ability to care for yourself, care for other people, and care for the environment. It is not a test. It is a survey to provide information for the Government.

Here is a list of 8 things that children at one school did during the time they spent at the school.

1. They took part in a survey on school uniform run by the School Council. The Council helped the head teacher and governors choose a uniform that was cheap and made in ways that did not harm other people or the environment.
2. They were taught in classes where the children had a wide range of abilities and were from very different sorts of families.
3. They did an activity about 'food miles' and why people should think about eating more food that is grown near to where they live
4. They grew vegetables on the school allotment with the help of some grandparents who taught them what to do.
5. They planted willow in the playground, shaped it into shelters as it grew. Later they used the shelters for shade on hot summer days.
6. They watched a wind turbine being built in the playground. An engineer from the local electricity company had told a school assembly that the turbine would save the school money and help to protect the environment.
7. They learnt about the United Nations and the work it does to encourage development and protect the environment in poorer parts of the world.
8. They met the cycling officer from the town hall and helped her to design safe cycling routes to the school.

Now look at the table on page 2.

In the first column (down the left hand side) are eight topics that pupils and teachers will be concerned about in schools that teach pupils to care for themselves, each other, and the environment.

At the top of the other columns are the ways in which schools teach pupils to care. They teach them in the classroom, through the way in which the school is organised, and by helping them to learn from people outside the school, in the local area and further away.

Now look again at the list of the 8 things the children did while they were at school. The first one is about school uniform and the School Council. It is about learning to buy things that do not harm the environment and the people who make them. It is also about the School Council that values everyone in the school community and encourages them to join in and have a say about decisions that affect such things as what they wear. A '1' (for item one on the list) has been put in two boxes of the table.

Can you decide where in the table the other seven activities belong? Write their numbers in the boxes where you think they belong. Remember that many of them will belong in more than one box.

Eight topics that pupils and teachers will be concerned about in schools that are teaching pupils to care for themselves, each other, and the environment.	Learning from lessons in classrooms	Learning from the school's own example.	Learning with people outside school in the local area and further away.
Eating healthily in ways that protect the environment and support local growers and producers of food. FOOD	3		4
Using energy and water efficiently in ways that reduce our impact on the environment. ENERGY AND WATER		6	6
Walking and cycling when possible improve our health and reduce pollution from cars. TRAVEL AND TRAFFIC	3		8
Buying things that do not damage the environment or the people who make them. Recycling, repairing and reusing things as much as possible. PURCHASING AND WASTE		1	
Designing buildings and their surroundings in ways that make them friendly towards the environment and pleasant places to live and work. BUILDINGS AND GROUNDS		4	6
Valuing everyone in the community and encouraging them to join in with community activities whoever they are. INCLUSION AND PARTICIPATION	2	1 2	4
Being concerned about local issues and wishing to get involved in the local community as an active citizen. LOCAL WELL-BEING			8
Being concerned about global issues and wishing to get involved as an active global citizen. GLOBAL DIMENSION	7		

Now consider four Year 9 pupils. All of them care about an issue that affects their lives and want to do something about it.

Michael cares about climate change because it affects all living things, now and in the future. He wants to find out about the impact of cheap flights on global warming. If cheap flights are a major cause of global warming he wants to join a campaign that is trying to persuade politicians in the UK and Europe to increase taxation on aviation fuel. This would make flights more expensive but governments would have more money to spend on energy conservation.

Sally cares about poor people affected by natural disasters. She wants to find out why it is usually the poorest people who suffer most in areas hit by natural disasters like floods, earthquakes and droughts. She also wants to find a charity that helps the victims of disasters and raise money for this charity.

Nasreen cares about where her food comes from and how it is produced. She wants to find out whether she should eat sugar made from sugar cane grown in tropical countries or sugar made from sugar beet grown in Europe? If she finds out that buying cane sugar helps poor farmers and their families, she hopes to join a campaign to encourage sugar imports from poorer countries and prevent Europe from ‘dumping’ cheap sugar on the rest of the world.

Jacob cares about wildlife and conservation. He knows that many new houses are to be built on the fields near to where he lives. This area includes a protected site that is the habitat for a rare species of toad. If this habitat is threatened he will lobby local and national politicians to make sure it is conserved.

What **values** prompted the pupils’ concerns? (Values are about how we should live or how we should behave.)

What **knowledge** will they need before they can take informed action on the issue that concerns them? (Knowledge is information and ideas that allow us to understand the world)

What **skills** should they exercise in taking this action? (Skills are abilities to get things done – to think, communicate, to carry out practical tasks)

On page 4 there are lists of values, knowledge and skills.

On these tables the letter N has been inserted next to the values, knowledge and skills that Nasreen needs to take action on the issue she cares about.

Insert the letter M into the three tables to show what values, knowledge and skills Michael needs to take action on the issue that he is concerned about.

Insert the letter S into the three tables to show what values, knowledge and skills Sally needs to take action on the issue that she is concerned about.

Insert the letter J into the three tables to show what values, knowledge and skills Jacob needs to take action on the issue that he is concerned about.

Values

We should care mainly for ourselves and our immediate friends and families	
--	--

We should care for our communities and local needs	
We should care for people across the world, especially those who are poor or suffering	S N
We should care for future generations as well as people who are alive today	M
We should care for our own possessions and property since this is what we own	
We should care for our local surroundings and environment since this is where we live	
We should care for the whole world's environment since this is what we leave for future generations	
We should care for the present generation (people now)	M S N
We should care for future generations (people in the future)	M
We should care for the rest of nature (plants and animals)	J M

Knowledge

Knowledge about the contribution of aviation to carbon emissions and climate change.	M
Knowledge of wet places where toads live.	J
Knowledge of how charities like Christian Aid and the Disasters Emergency Committee operate and the kinds of relief they provide.	S
Knowledge of firms like Tate and Lyle that process and sell sugar, including their policies on corporate social responsibility.	N
Knowledge of Oxfam's campaign to reform world trade and prevent rich countries from 'dumping' cheap surplus food on world markets.	N
Knowledge of the variety of plants and animals in the local area and action plans by local councils to conserve this variety.	J
Knowledge of Friends of the Earth's campaign to increase aviation taxes in line with the 'polluter pays' principle.	M
Knowledge about the world sugar trade and the impact of protectionism by rich countries on farmers in poor countries.	N
Knowledge that explains why the poorest people usually live in environments most at risk from natural hazards.	S
Knowledge of local wildlife trusts and how they work to encourage habitat and species conservation.	J
Knowledge of the power of the airlines, airports, and business lobby to influence the Government's decisions on airport expansion.	M
Knowledge about what kind of fund raising event to organise if you also want to educate people about the causes and relief of poverty.	S

Skills

Find information, weigh up evidence, and present reasoned arguments about the ways in which societies change and develop.	M S N J
Work with individuals, companies, politicians, charities and others to	M S N J

bring about the kinds of development that improve people's without damaging the environment.	
Think about how one's life is connected to the environment and how it affects other people's lives both locally and in other parts of the world.	M S N J

Appendix 3

The Relevance of the NFER Citizenship Education Longitudinal Study to an ESD indicator

The study seeks to assess:

- The extent of the students' exposure to and experiences of CE (ESD)
- The development of CE (ESD) skills and understanding as individual students move through secondary school
- Changes in the perception over time, as CE (ESD) become embedded in schools.

The second objective would seem particularly relevant to an ESD indicator that seeks to measure the extent to which learners have developed the skills, knowledge and value base to be active citizens in creating a more sustainable future. (DfES ESD Action Plan objective 2)

Five parts to Year 9 questionnaire:

1. what you do in school and out of school (items 1 – 19)
2. knowledge of politics/citizenship (20 & 21)
3. about yourself (22 – 28)
4. attitudes or views (29 – 45)
5. citizenship education in school (46 – 49)

Listed below are the items in the current Year 9 questionnaire that have specific relevance to ESD and might be used or adapted. Suggested revisions/additions are in italics.

What you do in and out of school

- 1 **Participation in clubs or groups** in school and/or out of school includes environmental clubs/groups and human rights groups or organisations e.g. Amnesty International as two of twelve options.
- 2 Which of seven listed **activities** have you taken part in during the last year. Includes helping in your local community. *Could be more specific in context of ESD. For example: Helping to make a local or distant community more sustainable*
- 3 If you could only do one of the 19 listed in item 1 and 2, which would you do. Many of the 19 have some relevance to ESD – debating clubs/groups; electing school/class council members; mock elections; etc.
- 7 Have you ever done any of these things? – seven **forms of action** – e.g. attended a public meeting or rally – all expressed in general terms but all could be done in the context of acting for sustainable development.
- 15 Over the last 12 months have you learned about any of the following **topics in school (in any lessons)**? 12 topics are listed all relevant to SD in some way. The most relevant are the environment, the global community and international

organisations, and rights and responsibilities. *Would be useful to add the topic of sustainable development to this list.*

- 16 Asks about **the school in general**. Six statements to tick - a lot to not at all. Most are relevant to ESD e.g. Are students consulted about the development of school rules and policies? *Would be useful to add - Are students involved in making the school more sustainable in its use of resources and in its links with the wider community?*
- 17 What generally happens in your **lessons**? Six statements to tick – a lot to not at all. All six relevant to ESD e.g. Are students encouraged to make up their own minds about issues?
- 18 How frequently do you do the following in your lessons? Eleven **lesson activities** – tick – never – often. Some indicate good ESD process e.g. explore, discuss and debate issues with other students.
- 19 Does your school have a **school council** or the equivalent – a means of consultation/ participation. This is a key indicator of a sustainable school.

Knowledge of politics / citizenship

- 20 Are these statements true or false? Seven statements. **Procedural knowledge of politics** e.g. the minimum voting age is 18. None relevant to ESD but it is possible to write such statements to test procedural knowledge of sustainable development. *Useful to add an ESD related statement. For example – In the UK the responsibility for planning land use and development is shared between national, regional and local governments.*
- 21 Again seven statements true or false? **Propositional knowledge** of politics e.g. 16 is the minimum legal age for getting married. None relevant to ESD but possible to write such statements to test propositional knowledge of sustainable development. *Useful to add an ESD related statement. For example – The UK government, the European Union, and the United Nations all have strategies or action plans for sustainable development.*

Attitudes / views

- 31 How much do they feel part of the places listed below? Five listed from school to Europe. ESD would expect a **feeling of belonging** to all. *Could add - My local environment, The global environment, and/or The natural world.*
- 32 Four statements about **the local neighbourhood** – agree or disagree – e.g. My neighbourhood is a place where neighbours look after each other – could be seen as an indicator of a sustainable neighbourhood/community. Not that relevant unless additional statements added. *Useful to add – My neighbourhood is a sustainable community where people care for each other and the rest of the natural world.*

- 34 Do you **support any political party** – yes/no and indicate strength of support. Of little use as ESD indicator in current form.
- 35 **Attitude to voluntary work** generally. Not ESD specific.
- 36 **Attitude to politics** generally, agree/disagree. Not ESD specific. *Useful to add – Politics has important role to play in helping the world's people realise more sustainable forms of development.*
- 37 Nine statements about **the good citizen** – agree / disagree – more or less relevant to ESD – most relevant are participate in activities to benefit people in the community; and takes an interest in local and community issues. *Could add – Recognises the rights of future generations and other living things.*
- 38 Eight statements mainly about **people's rights and responsibilities** – agree / disagree – most relevant to ESD are every person's duty to help out in their neighbourhood, and people should look out for themselves and not for other people. *Could add – People should be responsible consumers because the earth's resources are limited.*
- 39 Six statements – **what the government should do** – agree / disagree. One relevant to ESD – restrict car driving to control pollution. *Could add others – The government should – Seek to reform world trade so that the poorest countries have greater access to European markets.*
- 40 Five statement on **influence** – agree / disagree. All of some relevance to ESD – eg. when local people campaign together they can help solve problems in the community.
- 41 Six statements – **what I am likely to do in the future** – definitely to definitely not. All generally relevant to ESD e.g. get involved in local politics.
- 42 Six statements – **taking part in protest in the future** if confronted by something I thought was wrong – definitely to definitely not. All generally relevant to ESD e.g. contact my MEP
- 43 Four statements on **school ethos and rules** – agree / disagree. Not that relevant at present e.g. the rules in my school are fair. *Could add statements relating to a sustainable school. For example – My school is a sustainable school where people care for each other, the environment, and the wider community.*
- 45 Nine statements – **acceptable actions** – agree / disagree e.g. drop litter in a public place. Not that relevant at present but much scope to relate to SD. *Could add for example – Consume more than my fair share of the world's resources.*

Citizenship education in school

- 47 **How much** are you taught about citizenship? A lot/A little/ not at all/ don't know. *Could add a similar question. How much are you taught about sustainable development?*

48 **in what lessons/subjects**, are you taught about citizenship? *Could add similar question relating to ESD.*

49 eleven things that **citizenship means** (tick up to 3) includes looking after the environment, using the world's resources carefully. *Could add – for example – Safeguarding the rights of future generations and other living things; Making sure that societies and environments develop in sustainable ways.*

Appendix 4

Action learning for sustainable development: a framework for assessment

You have recently carried out a project in school* that focussed on how people can live more sustainably with each other and the rest of nature. This may have involved you in learning with people from the local community and/or people from a distant community.

Write about this project using these headings

1. **The Issue** (The issue you studied)
2. **Initial ideas** (Your ideas about the issue at the start. How you explained the causes of the issue, and possible solutions to the issue, when you started your project.)
3. **Action** (How you tested your ideas about the issue by taking action on the issue with other people in school OR with the local community OR with the distant community)
4. **Learning** (What you learnt about the issue by taking action with other people. How did your ideas about the causes of the issue and solutions to the issue change as a result of the actions you took? You may need to write about more than one stage of action followed by learning. Your project may have involved two or more stages.)
5. **Indicators** (What indicator or indicators, if any, did you use to assess whether the action and learning was leading people towards more sustainable ways of living with each other and the rest of nature?)
6. **Sustainable development** (What did the project teach you about the values, skills and knowledge people will need if societies are to develop in more sustainable ways?)

* similar framework might be used with some modification for students in colleges and universities.

Appendix 5

Test to determine whether (Yr 11) learners have developed sustainability as a frame of mind as a result of education for sustainable development

1 Which of these four diagrams best represents the relationship between the nature (N) and society (S) on planet earth? (Put a circle round the diagram you select)

(Four diagrams here – society within nature; society and nature overlapping; society and nature separate, nature within society)

Explain your answer.

2 People derive value from nature. It meets different human needs.

Give an example of how caring for nature can contribute to people's physical well-being or health.

Give an example of how caring for nature can contribute to people's mental well-being or health

3 If something is sustainable it can last indefinitely.

Complete the table by writing in examples of environments where the listed relationships are more sustainable or less sustainable. For example an old oak forest is an environment where ecological relations are more sustainable. A trading environment in which subsidies from rich countries prevent poor farmers receiving fair prices for their crops is an example of where social relations are less sustainable.

	More sustainable	Less sustainable
Ecological relations between rocks, soils, air, water, plants and animals		
Environmental relations between people and the rest of the natural world		
Social relations between people		

4 Art, architecture, poetry, literature, drama, music, and other forms of culture all convey meanings and messages about nature.

Think of one cultural work (a painting, building, poem, book, play, film, etc) that has influenced your understanding of nature. That has 'taught' you something significant about to how to live with your own nature and the rest of nature.

Name of this work.

What did this work 'teach' you about nature and how to live with your own nature and the rest of nature?

5 Western (modern, industrial) culture has brought considerable benefits for people by transforming nature into useful goods and services. It has also brought considerable costs.

Give an example of a different culture (past or present) that you have studied. This should be a culture that is (or was) more cautious in its approach to nature and may be (or have been) prepared to 'simply let nature be'.

The culture I have studied is:

What do you see as the advantages and disadvantages of such an approach to nature?

6 What do you need to believe about your own human nature (yourself) in order to care for yourself, sustain yourself, and try to develop yourself to your full potential?

What do you need to believe about other people in order to care for them, sustain them, and allow them to develop to their full potential?

What do you need to believe about the rest of nature (air, water, rocks, soils, plants and animals) in order to care for them, sustain them, and allow them to continue to evolve?

7 The following questions are about ways in which you have cared for yourself, others, and the rest of nature. Your answers might refer to projects you have carried out in school (college or university).

Give an example of how you have cared for yourself in a way that improved your health, self respect and/or happiness.

Give an example of how you have cared for other people (near or far) in a way that improved their health, self respect and/or happiness

Give an example of how you have cared for the natural world (plants, animals and their habitats) in a way that improved its well being.

Give at least one reason why you consider such caring behaviour a responsibility.

Has caring for yourself, others and the rest of nature made you more or less content (happy) with your own life?

More content / Less content / No difference

Has caring for yourself, others and the rest of nature made you more or less inclined to want material things like new clothes, entertainment, and holidays.

More inclined / Less inclined / No difference

8 Using the following headings describe how you think society should be organised to ensure that people care for themselves, each other, and the rest of nature in ways that enable them to live sustainably (in ways that can last indefinitely).

Technology

Economy

Politics, democracy and citizenship

Lifestyle

Education

Appendix 6

Exercise to establish whether or not Yr. 11 pupils have the skill to match decisions on consumer behaviour to the knowledge and values that are likely to have prompted such decisions.

This exercise is about three sixteen years old who each buy a cotton T shirt. Their names are Tom, Yaseen, and Jane

Tom is very fashion conscious and likes to be seen wearing brands that win his friend's approval. He is a cricket fan, loves shopping, and reads magazines like Nuts and Loaded. He takes some interest in news and current affairs, but believes that he has little or no power to change the way the world develops. Tom thinks the future will be fine if he gets a job that allows him to buy most of what he wants.

Yaseen is a deeply spiritual young man. He spends a good deal of time outdoors, watches wildlife documentaries, and feels a deep attachment to the rest of the natural world. He tries to live his life in a way that places few demands on the environment and other people, and cares little about possessions. Yaseen thinks the future will be fine if people rediscover how to care for one another and the rest of nature.

Jane is an active supporter of several charities and community groups. Her friends suggest she is always trying to make 'statements' through what she eats, what she wears, and the music she listens to. She uses the internet to find out about environment and development issues and has joined consumer boycotts of products she considers unethical. Jane thinks the future will be fine if people and politicians work to create a fairer world.

When they buy a cotton T shirt, Tom, Yaseen and Jane, are each differently influenced by such factors as the brand (eg. Nike, Gap); the price; the colour and style; whether their friends are wearing something similar; where it was made (eg UK, China); the pay and conditions of the people who make it; and the type of cotton and how it was grown and processed.

Tom buys an Ashes Winners T shirt from Marks & Spencer. It carries a lions and kangaroos motif and costs £12.

Yaseen visits several charity shops. After some searching he buys a plain green recycled (previously worn) T shirt for £1. It carries a label from Indigo clothing stating that it was made from organic cotton.

Jane does her research on the internet and considers T shirts supplied by Ethical Threads and those carrying the FAIRTRADE mark. In the end she buys a Fairtrade T shirt made from organic cotton from the New Consumer Shop site. It costs £10 and has the 'Make Poverty History' logo printed on it.

In considering the factors and reaching a decision as to what to buy, our three characters each draw differently upon knowledge and values.

There are twelve items of **knowledge about cotton T shirts** listed in the table below. For each of the three people (Tom, Yaseen and Jane) mark in the appropriate column the items of knowledge that you think are most likely to have influenced their decision on what T shirt to buy.

Knowledge about cotton T shirts	Tom	Yaseen	Jane
Many of the clothes imported into Britain each year come from countries where labour laws are either non-existent or are not enforced.			*
England has not won a test series against Australia for many years and many people wish to identify with the success of the team and the skill demonstrated by such players as Andrew Flintoff. Wearing a celebratory T shirt is one way of doing this.	*		
Today's teenagers have grown up in the age of the brand. They are bombarded and defined by name products and intrusive and clever advertising strategies. These strategies exploit their fragile self-image and need to belong to groups.	*		
Much current production and consumption of goods such as clothing is not sustainable. It damages ecological systems on which all life depends and leaves many people in a state of poverty.		*	*
The clothes in high street shops are produced by hundreds of suppliers all over the world. Competition between shop owners means that they look for cheaper and cheaper places to produce clothes. Phillip Green who owns the Arcadia Group with 2000 fashion shops worldwide is a billionaire.			*
Consumer society depends on people not being at peace with themselves and the rest of the natural world. If people had a deep attachment to their inner nature and the outer nature that sustains them, they would be more content and feel less need to constantly buy such things as T shirts.		*	
Cotton production has been encouraged as a way of reducing poverty in poor countries and helping them gain access to international trade. But like other commodity producers, cotton growers suffer from overproduction and low prices. Costs to growers of seed, fertiliser and pesticides are increasing, leading to debt (and suicide) problems. World cotton prices are distorted by the subsidies rich nations (the US, EU and China) pay to their growers.			*
Cotton has been genetically engineered to provide effective control of important cotton pests, mainly bollworms. Such Bt cotton (that expresses the insecticidal toxin <i>Bacillus thuringiensis</i>) is popular with growers. In 2002 it occupied 20% of the global cotton area. Many regard Bt cotton as a success story for		*	*

genetically modified (GM) crops, but others suggest it increases the dependency of poor farmers on large agricultural firms. GM cotton seed is expensive and new seed must be purchased each year.			
Cotton growing uses 25% of the insecticides and 11% of the pesticides applied to the world's agricultural land. These affect people's health, damage soil fertility, cause water pollution, leave residues on other crops, and reduce biodiversity. Organic production, that uses no chemicals, results in lower yields but reduces health problems. It also improves soil fertility and local food supplies because farms are less intensive and more diversified.		*	*
Most high street fashion shops have codes of conduct that claim their clothes have been produced lawfully, through fair and honest dealing, without exploiting the people who make them, in decent working conditions, and without damaging the environment. Campaign groups, such as No Sweat, claim that these codes are not always properly implemented and enforced.	*		*
Ethical Threads is a brand of clothing, owned by trade unions in London. It uses suppliers around the world that meet international conventions on workers rights. Ethical Treads products help to reduce exploitation and child labour in the clothing industry. A percentage of the price helps finance trade union and fair trade campaigns around the world. In 2005 a cotton T shirt with the Ethical Threads logo cost £15 and could be purchased from the Ethical Threads website.			*
Fairtrade cotton is cotton that carries the FAIRTRADE mark. This shows that those who produced the cotton received a fair and stable price that covered the cost of production plus a Fairtrade premium for investment in social development projects. Fairtrade aims to improve the position of poor growers in the South and enable trade to contribute to development projects that have community benefits. 17 of the 50 Fairtrade growers have been certified organic.			*

Now consider the twelve **values** listed in the table below. Values are moral principles or things we ought to do that may influence such decisions as what T shirt we should buy. Several (but not all) of the values listed in the table are taken from the Earth Charter, a widely accepted set of principles for guiding humanity towards more sustainable ways of living.

What values are likely to have influenced Tom's, Yaseen's and Jane's decision as to which T shirt to buy? Under each person's name put a tick against the values that you think may have influenced their decision.

Value	Tom	Yaseen	Jane
We should produce and consume things in ways that conserve the earth's resources, safeguard human rights, and improve the welfare of communities.		*	*
We should accept that with the right to own, manage and use natural resources comes the duty to prevent environmental harm and to protect the rights of people.		*	*
We should accept that with increased freedom, knowledge and power, comes increased responsibility to promote the common good.			*
We should seek to promote our own happiness and fulfilment even if we are unaware of the impact of our own behaviour on other people's lives.	*		
We should promote social and economic justice, enabling all to achieve a secure and meaningful way of earning a living.			*
We should recognize that peace is the wholeness created by right relationships with oneself, other persons, other cultures, other life, Earth, and the larger whole of which all are a part.		*	
We should make decisions and act in ways that do not limit choices for future generations.		*	*
We should value friendship and the support that comes from belonging to a group of people with similar interests.	*		
We should ensure that decision making takes account of the long-term, indirect, long distance and global consequences of human activities.			*
We should reduce, reuse and recycle the materials used in production and consumption and ensure that wastes do not damage ecological systems.			
We should adopt lifestyles that emphasize the quality of life and material sufficiency in a finite world.		*	
We should ensure that all trade supports sustainable resource use, environmental protection, and progressive labour standards.			*

Now consider your own shopping decisions.

Before you did this exercise and considered the knowledge and values listed in the tables, which of the conditions listed in the first column would you have seriously considered before you bought a cotton T shirt. Tick these conditions in the before column.

Now you have done the exercise, what conditions would you seriously consider? Tick these in the after column.

Condition	Before	After
The T shirt is ethically sourced. Minimum labour standards are met at every stage of its manufacture and distribution.		
The cotton and T shirt is fairly traded. Producers receive a fair and stable price which covers their costs plus money to invest in sustainable development projects that benefit the wider community.		
The T shirt is made from organic cotton.		
The T shirt is recycled		

Of the three characters, Tom, Yaseen and Jane, who acted in a way that more people will need to follow if we are to move towards more sustainable ways of living?

In reality how likely is it that your purchases are guided by a desire to encourage more sustainable ways of living?

Very likely / Likely / Unlikely / Very unlikely (Underline ONE of these)

Finally look at the following statements. By ticking the appropriate box, show whether you strongly agree (SA), agree (A), disagree (D), or strongly disagree (SD) with each one.

STATEMENT	SA	A	D	SD
I need more knowledge about products so that I can make choices that favour sustainable living.				
The world's problems are so big that I can make no difference. It does not matter what I buy, the world will continue to develop in unsustainable ways.				
There is so much knowledge. I need more guidance on who and what to believe or trust before I can make the right decisions.				
Education should teach me more about how to make decisions that encourage sustainable ways of living.				
I often buy the cheapest product. I need more help to recognise the real cost of products to people and the environment.				
I am content with how I live and what I buy. I really do not see any need to live more sustainably.				
I am strongly influenced by advertising and the media . I need help in understanding the media and resisting some of its messages.				
I am too ready to go along with the crowd and do what my friends do. I need more help to develop a way of living that I have chosen for myself and am happy with.				
I need more help to find ways of being at peace with myself and the world so that I do not need to buy so many				

things.				
I have enough problems as it is without having to think about whether what I buy contributes to more sustainable ways of living.				
Everyone seems to want the same things and live the same way. I would welcome more advice on alternative ways of living that may be more sustainable.				