

The Children's Identity and Citizenship in Europe (CiCe) Thematic Network links 28 European states and some 80 universities and college departments which are engaged in educating students about how children and young people learn about and understand their society, their identity and citizenship.

A cross-disciplinary group, we include lecturers in social psychology, pedagogy, psychology, sociology and curriculum studies, and those who educate various professions such as teachers, social pedagogues, psychologists, early childhood workers and youth workers.

Guidelines on Citizenship Education for Sustainable Development

Carmel Mulcahy, Nicole Tutiaux-Guillon

CiCe
Guidelines

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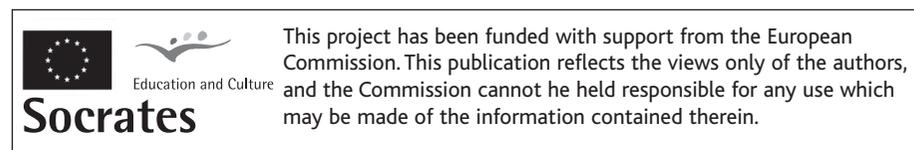
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Introduction

The United Nations Conference on Environment and Development (Rio de Janeiro, 1992) declared as its First Principle that: *'human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature'*. This principle assumes that humans are responsible for the conservation, protection and care of the environment¹. Agenda 21 called especially for the active participation of youth in 'sustainable development', a larger and more humanist concept than the environment.

The creativity, ideals and courage of the youth of the world should be mobilised to forge a global partnership in order to achieve sustainable development and ensure a better future for all (Principle 21).

The 59th session of the General Assembly of the United Nations in 2005 reaffirmed the continuing need to ensure a balance between economic development, social development and environmental protection as interdependent and mutually reinforcing pillars of sustainable development. The United Nations' Economic and Social Council, in their follow up to the Johannesburg Summit, outlined the role of educators as a key one for sustainable development.

These guidelines are intended to support educators who are committed to citizenship education for sustainable development (CESD).

Citizenship education is underpinned by the principle of rights, responsibilities and participation within a democratic society. Citizenship education prepares students to understand and be committed to the values inherent in democracy (Ross, 1999). Education for sustainable development also includes responsibilities, rights, democratic practices and values, and an understanding of the interdependence between all aspects of our societies. Besides political and ethical consciousness, education for citizenship welcomes ecological consciousness (Hernandez, 2004). CESD fosters competencies that are part of citizenship education, implies a focus on active learning approaches and can be integrated even into a wide range of curricula.

¹ In this booklet, 'environment' includes the whole external environment - natural, cultivated, built, social, economic and cultural - and the temporal environment of both the past and the future (Smyth, 1996).

Some definitions

All definitions are social constructs, even these that follow. Whatever their source, they serve particular social and economic interests and need to be assessed critically. Furthermore, this is English terminology; looking at the definition *in your own country* is very important. Discussing the relevance of definitions is also a fruitful learning activity, useful even with primary school students in the use of terms such as environment and pollution.

The definitions **in bold** are those to which we refer in this booklet. We value them as complex and relevant for our proposals.

Environment

Our physical surroundings (*Umwelt*); 'natural inheritance'; 'Nature', as opposed to what is created or transformed by societies.

The local concrete area in which a person lives, as in 'a suburban environment.'

The physical, cultural, social and economic frame that both surrounds people and affects them; it includes objective and subjective data, for example, 'a deprived environment'.

A complex net of relations between the concrete data of a specific area and the species living there, including humans - eg 'the rainforest environment'.

Sustainable Development

Whatever the definition, 'sustainable development' implies that the world currently is not sustainable, and that present societies have a responsibility in this. There are more than one hundred (controversial) definitions: some favour economic growth through technology (→ better producers and consumers), others favour human development and culture (→ better citizens).

Development that meets present needs without jeopardizing the ability of next generation to satisfy their needs, with an absolute priority given to the needs of the most deprived people (Brundtland, 1986). Sometimes summarised as '*People, Profit, Planet*'.

A new concept of progress: the capital of innovative techniques and new productive capacities can balance the destroyed natural capital (e.g. alternative energy).

A new type of economy, that reduces the consumption of material and energy and manages both financial flow and cultural dynamics; it should improve living conditions without exceeding the limited potential of the ecosystem (eg safe energy).

A way of thinking that encompasses the economical, the ethical, the epistemological, the societal and the ecological and that integrates humanity into the system.

A left-wing political programme, as well as a social, economical and environmental concern, opposed to materialism, liberalism and capitalism.

Ecology

The study of ecosystems, a natural science that develops rigorous approaches to the interrelations between living beings and between living beings and their physical environment.

Since the late sixties, the word has been associated with philosophical and political movements that claim respect for the environment and a more sustainable future. The Deep Ecology movements value the life of any species as much as they value human life, granting the same rights to any being.

Globalisation

A process in which the physical, political and social barriers to exchanges are reduced and relations between different parts of the Earth are close, so that parts influence other parts: local development is connected to global development.

A process of economic/cultural uniformity and the 'americanisation' or 'westernisation' of the world, often attributed to colonisation, multinationals and international organisations; blamed for the domination of Third World peoples and the disintegration of their civilisations and identities.

A process that expands the advances in science, engineering, medicine, technology and offers opportunities for wealth creation and intellectual exchanges. The awareness of our common humanity and our common responsibility for Earth is a result of globalisation.

A higher level of interaction, social integration and organisation of humanity, that should not to be reversed but has to be monitored to avoid its negative consequences.

Pollution

Undesirable state in which the environment is contaminated with harmful substances as a consequence of human activities, economic or domestic, resulting in waste, effluent or excessive consumption of space, soil, air, water etc. Even relatively benign products are liable to be regarded as pollution, if they cause negative effects later on.

Any unwanted substances in water, soil, or air that degrade the natural quality of the environment, offend the senses of sight, taste, or smell, or cause a health hazard.

A change in the physical, thermal, chemical, radiological or biological characteristics of the air, water or soil that can affect the health, survival, or activities of all forms of life in an unwanted way.

Governance

A framework of rules, institutions and established practices that set limits and give incentives for the behaviour of individuals, organisations and firms.

Territory/Space

Space: a part of Earth, a concrete area.

Space: a net of relations linking places and peoples, including also invisible links such as financial flow or information flow.

Territory: a space that has been appropriated by a social group through symbolic and concrete transformation, eg by naming it, using it, setting limits to it, electing typical landscapes, loving it... Different groups living in the *same* area have different territories if they live differently (eg sedentary and nomadic peoples in the inner delta of the Niger, farmers, craftsmen and tourists in an Alpine valley, or men and women in the same Arabic town).

Territory: an administrative district, an area of management; the area of State legal, financial and administrative control.

Hazards /Risks /Catastrophe

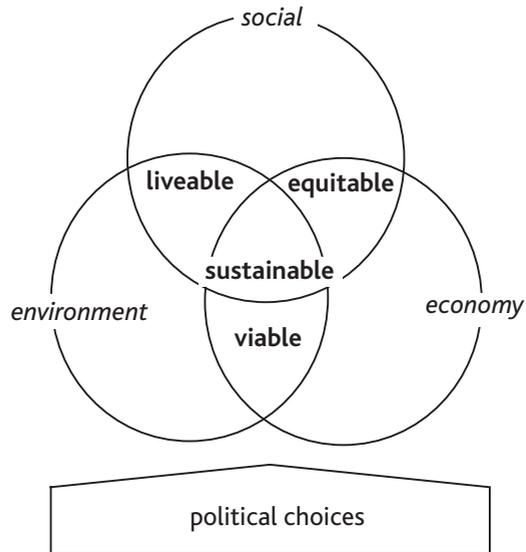
The concept of hazard can be interpreted by societies as a game of chance. However it can also be interpreted as something that can be planned and evaluated - eg games theory uses statistics to determine the chances of risk.

The hazards of a specific environment, however unpredictable, are expected characteristics of this environment. They might be natural, industrial, economical, biological etc. These hazards become 'risks' if a society fears their potential negative effect: it depends on economy and culture, more than on the hazard itself. If the damage on the society is dramatic and/or long lasting, it is a 'catastrophe'.

Western societies are more and more intolerant to risks (thus the success of insurance companies!). Intolerance increases the demands for state responsibility and international solidarity. Thus the 'precautionary principle' emerged: not to prove the damaging effects of a practice/process, but to prove that it has none. Lack of scientific certainty regarding damages can't be used as circumstantial evidence.

Citizenship and sustainable development: shared values

A possible representation of sustainable development
(adapted from D.Bourg, 2002)



The diagram suggests that opting for sustainable development is a matter of political choice between different social/economic/cultural plans. Principle 10 of Agenda 21 sets out that environmental issues are best handled with the participation of all concerned citizens; it identifies the right of the citizen to information on environmental issues and to opportunities to participate in the decision-making process. Throughout Agenda 21 there are references to the eradication of poverty as an indispensable requirement for sustainable development. It underlines the need to achieve sustainable development and a higher quality of life through the reduction and elimination of unsustainable patterns of production and consumption and through the promotion of appropriate demographic policies. Such assertions clearly connect education for a sustainable development to citizenship education.

Most commentators agree that school is a space in which critical, responsible, responsive citizenship can be explored, developed and encouraged. Even if '*citizenship education is a highly contested and complex issue, difficult to define and fraught with difficulties*' (Bauer et al, 2003), there is general agreement that education for citizenship offers an opportunity to explore the constituent elements of democratic society and what it means to be an active citizen in a

democratic setting. In several countries this now includes environmental education, education for Europe, etc.

Kroflic (2004) argues that to prepare children for life in social reality, citizenship education should be underpinned by a focus on the common core values of coexistence². Values such as respect, honesty, self-esteem, trust, courage and equity would be typical core values, and can be fostered through different subjects. The transmission of such values pre-supposes a safe school setting: a space where democratic decision making processes and negotiation procedures underpin the life of the school, and a school that tends to model sustainable development.

The link between education for citizenship and education for sustainable development is the recognition of common values that support citizenship and ethical sustainability. Environmental values grow through learning, out of beliefs and attitudes derived from

what the learner has been told, what has been absorbed through experience and what has been actively pursued by the learner in response to inspiration from others or to personal interests and desires (Smyth, 1996).

Rodger (1993) linked values, people and their environment through how people use the environment, *manage* it, *protect* it, *admire and celebrate* it and how they *respect* it. From the perspective of sustainable development, there is a need to move from utilitarian and instrumental approaches and towards higher order values of respect and solidarity with the oneness of nature and mankind that supports ecosystems, equitable societies and a more viable world. The *Nine Principles of Sustainable Living*, identified by the World Conservation Union in 1991, offer a firm values statement for educators for CESD:

- Respect and care for the community of life
- Improving the quality of human life
- Conserving the earth's vitality and diversity
- Minimising depletion of non-renewable resources
- Keeping within the earth's carrying capacity
- Changing personal attitudes and practices enabling communities to care for their own environments
- Integrating development and conservation
- Creating a global alliance.

² The recognition of core values is a much-debated topic in citizenship education but, from the perspective of the educator, there must also be recognition of specific cultural and familial values that exist alongside (and sometimes compete with) common core values.

Hernandez (2004) points to values that can be developed through study of citizenship and the environment in a scientific perspective; she distinguishes values involved in the search for information, specific values for environmental education and personal values.

Possibly even more important is ensuring that the *principles* underpinning CESD can be incorporated into all subject areas and become an integral part of education. The table on the following pages proposes examples of learning activities, referring both to some contents and to some values or principles linked with CESD, for students aged 15-17.

Learning methodologies should encourage the transmission of core values through the creation of space for debate, discussion, sharing of ideas, creative problem solving, working in teams and through the development of critical thinking skills that will support future citizens in *real* environments, away from the protection of the *safe* school. Where such learning is accompanied by recognition and respect for common values, then the complexities of citizenship can be explored more thoroughly.

| <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Skills and knowledge (some examples)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Values and attitudes (some examples)</div> </div> | Systemic approach | Problem solving |
|---|---|---|
| Political commitment | Explain how a legal decision (such as creating a nature reserve) can change a specific system; take position on such a decision through a systemic analysis. | Identify different communities in an area and their potentially conflicting interests in using the space (for example, in a coastal marsh ecologists, hunters, tourists, farmers...); propose solutions to solve these potential conflicts. |
| Local awareness | Analyse the possible consequences of local planning decisions on the environment and society, noting actions and reactions; identify the possible imbalances created by planning. | Same activity as above in the local area, specifically stressing one's personal use of space. |
| Responsibility as consumers | Analyse the positive and negative consequences of the introduction of GM crops on a farm (taking into account the economy as well as the environment). | Include in the price of some products currently imported from underdeveloped countries their environmental cost and social cost. Discuss the idea of a 'fair price'. |
| Sense of the aesthetic | | Research how the ambience and/or beauty of the local area could be improved. |

| <i>Sustainability</i> | <i>Energy</i> | <i>Environment</i> |
|---|---|--|
| <p>Research national sites that present an important industrial risk and existing safety measures; discuss the need to balance between employment and safety.</p> | <p>Examine the different possibilities of supplying electricity from renewable resources in one's country (sun, wind, water).</p> | <p>Reflect on the short and long term consequences of political choices: for example, favouring roads over rail for goods transportation.</p> |
| <p>Plan a sustainable development for one's locality; reflect on the necessary moves; evaluate the realistic possibilities for such moves.</p> | <p>Same activity as above, for one's locality.</p> | <p>Identify the threatened environments in the local area; propose measures; evaluate their social and economical cost.</p> |
| <p>Debate: 'is fair trade a solution to agricultural difficulties in the Third World?'</p> | <p>Use experiments to plan ways to conserve energy at home.</p> | <p>Critically think about some socially pleasant activities that are dangerous for the environment and people (such as off-piste skiing).</p> |
| <p>Look at a landscape. Imagine it transformed to welcome tourists, first in a traditional, then in an eco-friendly way.</p> | <p>Look for the types of energy pictured in paintings during the 19th and 20th century (coal, electricity, petrol, wind...). Explain the results through the aesthetic appeal of each type of energy.</p> | <p>Compare different descriptions of the same environment (e.g. deserts, high mountains) to understand that aesthetic appreciation differs with culture.</p> |

Practical professional solutions

Since 1990 environmental education or education for a sustainable future has been introduced explicitly in some countries. But it is not necessary to wait for a change in the curricula! Teachers and trainers might rely on their experience, competences and commitment and use the existing prescriptions and the educational opportunities in order to develop CESD.

CESD means training young people to manage uncertainty, to face dilemmas, to exercise their individual responsibility, and to assume collective responsibility. It also means fostering active citizens who are able to inform themselves and participate in public debates and actions, with sufficient knowledge to understand experts from different fields and the critical competence to evaluate their arguments.

Knowing what has been done and decided at national and international level (ONU, EU, OCDE, WBCSD³) is part of CESD. But it is more efficient to reflect on local problems: young people are thus directly involved, especially if the issues are their own proposals.

Biology, the social sciences (including history and geography), economy, political education and ethics or philosophy are directly related to CESD. But *every subject* can contribute to develop knowledge and competences regarding CESD, *at any educational level*⁴. Physics – in secondary education – tackles uncertainties. Arts teach students to aesthetically value the environment and to plan for an aesthetic future. Language can teach students to analyse vocabulary and arguments in the media and to criticise relevance and validity. Mathematics allows for understanding the concept of relative risk. In vocational or technical education students can learn to estimate the impact of their professional activities on environment and society, and to evaluate their ethical implications as well as economical ones.

CESD also means transversal or interdisciplinary work. The key is connecting different types of knowledge. For example:

- Philosophy and sciences: 'how can sciences provide the means to reach ethically defined ends?'
- Economics, civics and biology: 'analyse the results of an enterprise in terms of profit, social development and environmental cost'.
- Arts, language and economy: 'analyse/create an advertisement for fair trade or alternative energy'.

³ World Business Council for Sustainable Development, regroupant 165 multinationales for promoting sustainable development.

⁴ Cf. bibliography at the end of the booklet

Some researchers stress that CESD values the *diversity* of knowledge, including non-academic knowledge and grass-roots knowledge. CESD is a participatory process: working with local inhabitants, associations, on real local projects and problems is of core interest.

In any case, the issues must be relevant, understandable, and appropriate to the students' ability to reflect and *create solutions*. With young children, it is especially important to study issues over which they have some *control*, and to avoid what may frighten or discourage them.

We now propose some very short examples of learning and teaching linked to different subjects. The methodologies proposed are not only didactic; *they match the principal competencies necessary for the citizen committed to sustainable development*. Each example can be adapted to other levels. The key is bringing *together* the skills, the knowledge and the attitudes, as shown in the earlier table.

Physics - *problem solving – energy*

(This is only a general draft: the level will depend on the curricula in physics and mathematics.)

The purpose is to enable students to learn about energy conservation and renewable energy, and to devise solutions to practical 'real' problems in relation to energy.

The problem is to 'design an energy efficient house' for a specific region. Using exact data, the students have to calculate the amount of kWh necessary for a family during a year (heat, light, cooking, communication, leisure etc.). This can include experimenting with insulating material, and thinking about the possible use of insulation materials to minimize energy needs.

Using a solar resource map for the intended region, students calculate how much solar energy can be produced, how many solar cells this will need, and the different amounts for each season and how to maximise this energy. They do the same using a wind resource map, and calculate the type and number of the windmills required for the same house. Both activities might include experimentation (such as how can a motor be activated through solar energy?). At this stage students discuss the potential of renewable energy and possible realistic choices.

They complete the work by estimating how much fossil energy is still needed, and when it will be required.

Natural sciences / Physical geography - reasoning systemically - studying rivers as systems

Age level 17

The aim is to develop the students' ability to think systemically by reflecting on action/reaction/interaction and their sensibility to environmental complexity. This is a key competence in environmental education, and also in CESD, because of the need to link environment, society and economy.

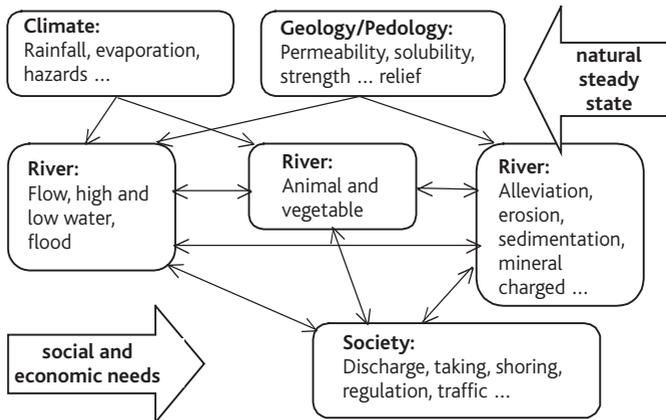
The knowledge involved relates to hydrology and water management.

The basis is a diagram representing the system 'river – land – society'⁵. The teacher or the students qualifies the diagram with data referring to a particular river-land-society (e.g. rainfall level, type of rock, watering systems), but this is not the core learning activity.

The students

- Complete the relations (actions, reactions, interactions).
- Identify the balances, make hypotheses on hazards and possible risks using the diagram and documentary file.
- Propose possible solutions for a definite problem (set in the documentary file).

The students confront and discuss their statements with the teacher's support.



⁵ The diagram could be simplified, but the systemic non-linear approach, and the linking of society and nature should be kept. It could be made more complex, for example by introducing ground water and relations to climate, geology, river and social or economical uses.

A simpler possibility for younger pupils would be for them to label what is 'social' and what is 'natural', and identify examples of interactions between society and environment. Points can be discussed, such as are the animal and vegetable species 'natural'? Are the sedimentary and mineral charges in the river 'natural' or 'social'? The answer will depend on the case study.

Geography / Economy - *multiscale reasoning - highways in local / regional / national or European scales*

Age level 14 and 16

The skill to connect events in local, regional, national, European and global spaces is increasingly necessary in a more and more globalised world and society. 'Multiscale reasoning' is also a decentring process, being able to include the needs and constraints of a space that is not primarily one's own territory.

In this case the students study a plan for a new section of a highway in their own region or in a region of their country - a real example would be best. The aim is to see that different peoples' interests might conflict, and also that the rationales might differ – and even be contradictory – when the scale is different. It is key that each student's reflection takes into account *all three different scales*.

Answering a general question (a or b, see table on the next page), the students point that the answers depend on the scale chosen as core, and describe the main dilemmas between the three scales, and eventually between environmental, economical and social impacts. The students then propose solutions they judge relevant for a sustainable future, taking into account each scale.

The table on the next page is a memorandum for the teacher, not a document to be given to students.

| | Local scale | Regional scale | National or European scale |
|---|---|---|--|
| The documents should give evidence of different data for the various scales, and allow the identification of conflicting interests: see the suggestions | Provide maps on three scales: consider activities affected by the planned highway. Provide relief maps and population maps. Information on costs, on alternative communications, on the environment. Regulations and legal constraints and opportunities. Press comment and articles. Possibility of demonstrations. Different political views – community views. Interviews with different local / regional / national people, including heads of enterprises. | | |
| Possible issues for questioning | <p>a) Is this road useful – will the benefits outweigh the disadvantages?</p> <p>b) Which is the best local layout?</p> | <p>a) Is this road useful – will the benefits outweigh the disadvantages?</p> <p>b) Which the best regional layout?</p> | <p>a) Is this road necessary? Is there an alternative?</p> <p>b) Through which regions could this road be routed? Which region would be the best choice?</p> |
| Questions stressing the social impact | Those who benefit (eg commuters); those who lose (eg farmers). | Employment (short term in construction, long term economic impact); Mobility within the region. Possibly different winners and losers locally and regionally. | Movement within the country (migration, holidays). Changing the image of regions (eg isolates/heavy traffic...) Sharing the problems of European traffic between regions. |
| Questions stressing the economic impact | Enterprises attracted by good communications; those gaining/losing from the traffic. Possible tunnel effect?* | Regional economic boosts, and activities where the road may have a negative impact. Changing the economic balances for locations. Links with other communication systems. Alternatives | Economic support for regions; better balance of through-traffic. Alternatives: changing the economic balance and location - but changes may differ from those hoped or feared on the regional scale |
| Questions stressing the environmental impact | Plants and animals affected by the layout; CO ₂ ; visual impact. | Preserving possibly national park. Diverting the heavy traffic may be positive. | Preserving the regional landscape, possibilities of regional park. Diverting the long distance traffic to have positive impact on other regions. |

*When two towns are linked by a highway without intervening exits traffic no longer passes through villages or towns off the highway, as if the cars were driving in a tunnel.

History – *long term reasoning - past climate changes in the Alps*⁶

Age level 14.

One of the most difficult skills to develop in CESD is long-term thinking, or the ability to envisage a distant future and to think on a large time-scale, connecting past, present and future. This example addresses these abilities.

Europe had a 'mini ice age' (circa 1300-1850), with lower temperatures, longer snowy winters, rainfall and extended glaciers. The alternating stop and go of the ice age impacted on crops and human health. Human activities in the mountains changed according to climate evolutions: mining, breeding, cultivation, seasonal migration, transportation etc. By c 1850 the climate became warmer (not through the influence of industry), though some human impact on the atmosphere may have been evident since c 1750.

Students should understand that the climatic changes are not new, but that causes and rhythms might differ, and that cultural and economical impacts are dependent on the type of society.

Students' activities might differ because of the availability of the documentary file that the teacher can collect. Core points are

- Characterising and interpreting variable relations between climate and economy in rural society over a long period, summarised in a complex chronological diagram or a narrative (long-term thinking, making hypotheses).
- Comparing past and present climatic changes: causes, current social conceptions and reactions, impacts; presenting this through a table (critical thinking, moving from analogies to reasoned comparison).

Example of a file of activity might be: a map of an Alpine valley (18th and 19th centuries); pictures of the glacier, woods, prairies and villages (17th and 19th centuries); graphs featuring local baptisms, funerals and wheat price during 17th and 18th centuries; texts from local priests describing usual situation and crisis (17-19th centuries); texts about the little ice age and the chronology of the changes written by historians and geoscientists.

⁶ Other regions could be studied, but this historical investigation has been more developed for the French Alps (eg in the L'Argentière valley).

Language – Debate - poverty and environmental degradation

Age level 13-15

Debate is a useful teaching strategy to explore issues around sustainable development from a citizenship and values perspective. The example we have given can be used also in Geography, History, Language Studies and Environmental Studies.

The topic chosen relates to poverty and environmental degradation. However the range of possible topics is extensive and the method can be adopted to suit a range of age groups.

| | |
|-------------------|---|
| Materials | <i>General Classroom equipment. Ideally overhead projector/ Powerpoint.</i> |
| Room | <i>Layout to represent a debating chamber.</i> |
| Prior Preparation | <i>Topic to be given a week in advance.</i> |
| Teacher Role | <i>Observer. Monitors that rules of debate have been observed.</i> |

Forward planning is needed to ensure the success of this approach. To achieve maximum learning, the teacher must prepare with the group: once rules have been established and the topic decided, the role of the teacher becomes one of facilitator and monitor evaluator.

The negotiation of rules with a group of students is a model of democracy and the rules themselves will help to underpin the values of CESD. Rules might include democratic decision-making, listening skills, respect for the viewpoint of others, negotiation and dialogue. These rules could be written as a Values Statement and displayed in the classroom.

| | |
|--|--|
| Debate the motion that poor nations cause more environmental degradation than rich countries | |
| Aim | To generate discussion on Principle 7 of Agenda 21. |
| Objective | To encourage students to focus on the implications for governments in the implementation of sustainable development agendas. |
| Methods | Research: on-line and paper based. Review of resource material. |

| Formulation of coherent argument | |
|----------------------------------|--|
| Knowledge and Skills Acquired | Social and economical causes of environment degradation Adversarial Skills Decision making Skills Debating Skills Group work Skills Comprehension Skills Attitudinal Skills may be enhanced. |

Multi-subject work *Cooperative group Work - city*

Age level: upper end of Primary School

The ability to work in a group is important in all aspects of our lives as citizens. Teachers in almost all learning situations can develop this skill in their students, but in particular they can use it to support the development of knowledge, skills and attitudes for sustainable development. The following example can be adapted for use with a class of older students.

This simulation requires children to cooperate in developing a new city. The exercise creates a number of dilemmas around planning, the use of green spaces, access to cars and heavy duty vehicles, transport systems and the utilisation of natural amenities such as rivers and forests. They could also consider types of building materials that ensure that energy is used effectively and that materials are environmentally friendly⁷.

Children need to give thought to the site for the city, and explore possible natural hazards caused by climatic conditions or manmade hazards that building the city in a particular location may cause. Groups can look at the problem from a geographic perspective, a social perspective, an historical perspective (searching for archaeological remains), a demographic perspective and an economic perspective.

Lessons drawn from the exercise may be used to look at how poor planning in the past has impacted negatively on the environment and on sustainable development.

⁷ While some computer games are structured around similar issues, the teacher should check the underlying values, which might differ greatly from those involved in CESD (eg competition, egotism)

Economics - Enterprise Education - Business Studies - Critical Thinking

Age level 16-18

The ability to think critically is one of the most important skills that educators can encourage in students, yet it remains one of the most elusive skills to measure. Critical thinking is a feature of each of the pedagogical methodologies presented in this booklet. This example however focuses specifically on critical thinking for senior students.

The focus of the exercise is the interdependence between people, the environment and the economy. Students are presented with a case study involving the production of children's clothing in China for the European market. They are asked to consider the impact on both China and Europe from the following perspectives:

- Workers
- Consumers
- The environment
- Economic growth
- Politics and governments
- Transport
- Immigration

From the perspective of workers, for example, students look at working conditions in China, at the impact of cheap imports on the European labour market, at migration from rural China into overcrowded Chinese cities and at the relevance attached to sustainable development by workers in both regions of the world.

A fruitful process is to have the students first express their ideas, and then to confront them with valid data, so that they critically reflect on their own conceptions and stereotypes.

Civics – Economics - Dilemma – sustainable consumption

Age level 12-15

A dilemma is a problem that leaves us with a range of possible options, and the impact of those options on our future lives. This dilemma supports students in their understanding of sustainable development and ethical approaches to the environment. It has application across a range of subject fields, and is based on the issue of sustainable consumption.

The students are introduced to a specific context for the debate (for example, environmental change, the situation of the car industry, energy costs). One example might be that the 15% of the world's population who live in high income countries account for 56% of the world's total consumption (United Nations Commission on Sustainable Development). If everyone was to live like the average person in high-income countries, we would need 2.6 additional planets (Ecological Footprint Sustainability Measure, 2004).

The dilemma in this context might be as follows: a new eco-efficient, fossil fuel driven car becomes available on the European Market. It would drastically reduce harmful emissions and have a positive impact on world energy conservation. But it costs about 20% more than similar cars, and running costs are also 20% higher. Your government wants to make it obligatory to use this new technology, but the decision is to be made by a constitutional vote.

Students are asked to consider possible approaches and to justify their final choice.

The aim of CESD is to encourage the development of values and thinking skills to ensure that young citizens can support a sustainable future. It seems appropriate in the Decade of Education for Sustainable Development (2005-2014) that the CiCe Network addresses this important aspect of citizenship.

Selected bibliography and nettography

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UNESCO Recommended Sites

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| http://www.unesco.org/education/ | http://www.csq.qc.net |
| http://www.un.org/esa/sustdev/ | http://www.csq.qc.net |
| http://europa.eu.int/ | http://www.iisd.org/ |
| http://www.wwf.org | http://www.novethic.fr/ |
| http://iblnews.com/di | |

Other Sites

- <http://www.agora21.org> (official texts and data)
- <http://www.manicore.com> (especially on energy)
- <http://www.becitizen.com> (precise the stakes and the different points of view)
- <http://www.worldwatch.org> (global measures)
- <http://www.johannesburgsummit.org>
- <http://www.ecodes.org> (the Spanish site of the Foundation for Ecology and Development)
- <http://www.desarrollo-sostenible.ecologia.deeuropa.net> (links to other sites; Spanish)
- <http://www.developpement.durable.science-po.fr> (College of political sciences; French)
- <http://www.revue-ddt.org> (Développement durable des territoires; French)

Many firms have website links to 'sustainable development'; check also political and administrative web-sites, and of associations.