



Programm
Transfer-21
Bildung für eine
nachhaltige Entwicklung

Guide

Education for Sustainable Development at Secondary Level Justifications, Competences, Learning Opportunities

Compiled by the Transfer-21 Programme's 'Quality and Competences'
working group



Transfer-21 Programme

Guide

Education for Sustainable Development at Secondary Level

Justifications, Competences, Learning Opportunities

Compiled by the Transfer-21 Programme's 'Quality and Competences' working group

Publication Data

This material has been published by the Transfer-21 Programme and was developed by the 'Quality and Competencies' working group.

Members of the Transfer-21 Programme 'Quality and Competencies' working group:

Dr. Dietrich Aldefeld (former member of the steering committee for Mecklenburg-Western Pomerania), Dr. Christiane Averbeck (former executive manager of the Coordinating Office, FU Berlin), Elisabeth Geffers-Strübel (Project leader, Thüringen), Prof. Dr. Gerhard de Haan (Project leader, Coordinating Office, FU Berlin), Jürgen Drieling (Project leader, Lower Saxony), Armin von Dziegielewski (IFB Rhineland-Palatinate), Beate Fritz (Project leader, Brandenburg), Hilla Metzner (Project leader, Berlin), Melanie Helm (Project leader, Saarland), Reiner Mathar (Project leader, Hesse), Gerhard Nobis (Project leader, Hamburg), Dr. Michael Plesse (Coordinating office, FU Berlin), Sabine Preußner (Coordinating office, FU Berlin), Rolf Schulz (Project leader, North Rhine-Westphalia), Jörg Utermöhlen (State Schools Authority, Lower Saxony), Dorothee Werner-Tokarski (Teacher Training Centre, Rhineland-Palatinate)

Translation

Peter A. Shepperson

Layout

Freya Diepenbrock

Publisher

Transfer-21 Programme
Kordinierungsstelle
Freie Universität Berlin
Prof. Dr. Gerhard de Haan
Arnimallee 9
14195 Berlin
Germany

Telephone: +49 (0)30 838 525 15

info@transfer-21.de

www.transfer-21.de

Berlin 2007



Gefördert als BLK-Programm von Bund und Ländern im Zeitraum vom 01.08.2004 bis 31.12.2006.

Contents

Publication Data

Contents

0	Education for Sustainable Development – Learning Goals and Targets for Secondary Level	7
1	The Contribution of the Area of Sustainable Development to General Education	12
2	Competence Areas of Education for Sustainable Development	
3	Competence Areas of <i>Gestaltungskompetenz</i>	17
3.1	<i>Gestaltungskompetenz</i> in the context of the competence category 'Using tools interactively' (T)	17
3.2	<i>Gestaltungskompetenz</i> in the context of the competence category 'interacting in socially heterogeneous groups' (G)	18
3.3	<i>Gestaltungskompetenz</i> in the context of the competence category 'Acting autonomously' (E)	20
4	Learning Opportunities	22

0. Education for Sustainable Development – Learning Goals and Opportunities for Secondary Level

This guide sets out the competencies that pupils should have acquired on completion of secondary education within the scope of education for sustainable development. The guide is intended to support teachers, school administrations, parents and pupils, enabling them to act systematically and appropriately in this area. The guide should additionally set guidelines for schools which intend to integrate education for sustainable development into their school programme. For teacher trainers, the guide is to be seen as a basis for the creation of training measures, and education authorities can see it as an instrument providing important guidance in setting curricular goals.

After a brief description of the significance of sustainable development for modern, innovation-driven societies in a globalised world, and suggestions on the contribution that education for sustainable development can make to general education, the learning goals of education for sustainable development are formulated. This is followed by a systematic description of the competence areas of education for sustainable development. In so doing, the 'key competencies' identified by the OECD provide the frame of reference. Education for sustainable development should promote the acquisition of *Gestaltungskompetenz* ('shaping competence'). The aim of this concept is to instil the ability to engage in a thoughtful manner with sustainable development processes, personally and in cooperation with others, and to systematically analyse and assess unsustainable development processes. *Gestaltungskompetenz* can be further broken down into its constituent part-competencies. On the basis of this detailed description, it is possible, firstly, to establish connections to existing statutory curricula, school subjects, areas of learning, internal school curricula and school programmes. Secondly, on the basis of these part-competencies, it is possible to pursue innovation and development in school programmes, etc. Following on from the description of the competence model, learning opportunities are presented. These are intended to demonstrate the contents, difficulty levels and forms of assessment best suited to the part-competencies. These learning opportunities, too, are intended to provide guidance. They do not set the actual contents of the part-competencies in stone – rather, they have an advisory character.

This guide is part of a package of materials on the topic of 'Competence and Quality Indicators for Education for Sustainable Development'. Besides the present guide to *Competencies and Learning Opportunities*, the package also contains a *set of indicators* that enables schools to conduct a self-assessment of their profile in the area of education for sustainable

development. The indicators do not only cover use of resources and the extent to which education for sustainable development is taught, but also aspects of sustainable school management and also, for example, external cooperation relationships. The package also contains a model *School Programme* with a focus on education for sustainable development. For further information and to view the learning materials, please visit the site www.transfer-21.de and click on the link 'Materials'.

1. The Contribution of the Area* of 'Sustainable Development' to General Education

Our society has committed itself to the goals of social justice and humane living conditions. Its culture is characterised by diverse lifestyles and worldviews, globalisation processes, research and technology, various forms of democratic politics and economic adjustments. The interaction between these orientations, forces and discoveries has brought about progress at a number of levels. For example, expanding scientific knowledge has repeatedly brought new achievements in medicine, in goods production, in energy sources, data processing and communications. Economic progress enables needs to be satisfied by products and services. The struggle for equality, human rights and participation in civil society is a firmly established component of modern politics. The goal of creating conditions of social justice has led to efforts across society to develop social security systems, to ensure greater equality in education and the involvement of citizens in democratic decision-making processes. This basis has allowed a diverse culture to develop, as well as lifestyles which should allow all to express their individuality, to live healthily and safely, to navigate in social networks and to participate in political decision-making processes.

Often, however, modern lifestyles, social relations, economic activities and approaches towards nature, its resources and its resilience are not yet sufficiently sustainable. This is because many of the predominant forms of goods production and distribution, the technologies employed, working conditions, consumption patterns, the organisation of politics and the unequal distribution of opportunity can lead to asymmetries, problems, risks and dangers. This is true, firstly, of the intervention in nature that has become possible through scientific discoveries and new technologies. And, secondly, this is also true of the structure of social relations and the processes of labour, economic activity and trade. Thirdly, and not least, individual lifestyle choices often entail significant consumption of resources, and personal projects still take too little account of respect for the diversity of cultures and the strengthening of social bonds in a global-

* The term 'area' or 'area of action' signals that education for sustainable development (ESD) is not part of any individual school subject, nor is it a subject in itself. ESD, like sustainability science, is interdisciplinary and problem-oriented. It aims to enable to people to take action in a considered manner. ESD issues can be tackled in cooperation between different subjects or separately, but also within a single subject provided multiple perspectives are reflected. The term 'area of action' was selected as other possible expressions such as 'learning area', 'learning field', 'subject-spanning teaching' or 'cross-subject teaching' are used with varying meanings in the curricula and frameworks of the different German federal states.

ised world. The use of scientific and technical knowledge is ambivalent. When such knowledge is applied, the consequences often lead to more prosperity and wellbeing, but can also impose burdens on current and future generations. Thus, non-renewable resources consumed in the quest for economic prosperity will no longer be available to future generations, and working conditions in many cases cannot be described as humane. Injustice in the distribution of opportunity exists both nationally and at the global level. In addition, existing lifestyles and consumption patterns are often unhealthy. Levels of consumption in the most highly developed nations are greater than would be feasible if all people had a right to this level of consumption. Such asymmetries, problems, risks and dangers must be identified, analysed, assessed and reduced. This takes place in the context of research, target-setting and measures that can be bundled together under the title of 'sustainable development'.

As non-sustainable forms of development arise from the existing economic order, political structures and global interactions – but also from our individual actions and our current values and principles; and as sustainable development process can only be achieved through common goals and common efforts, everyone must acquire problem-oriented and action-oriented knowledge about sustainable and non-sustainable development processes.

Education for sustainable development (ESD) enables the individual to participate actively in analysing and assessing non-sustainable development processes, to follow criteria of sustainability in their own life, and to initiate sustainable development processes together with others at both local and global levels. This makes education for sustainable development a significant component of general education.

Research into sustainability, and considered reflection on the goals of sustainable development, are, as a science and as a specialist debate, pursued in an interdisciplinary and problem-oriented manner. It is, for example, impossible to make any appropriate statement on climate change if you only look into meteorological, biological or chemical and physical parameters. Rather, research into the causes would need to tackle this transformation from sociological, psychological, political, economic, legal and philosophical perspectives. For, if it is true that climate change is caused by human activity, we also need to know, analyse and assess the contextual conditions (use of fossil fuels, growing consumer demand, global economic structures, attitudes towards nature etc.) For example, social justice cannot be appropriately dealt with without taking into account a range of cultural perspectives and concepts of justice, the unjust distribution of access to resources like food and knowledge, and the strategies and efforts being made at the international level, the national level and in civil society to overcome poverty.

In order to build up competencies which are appropriate to the complexity of the problems, education must take place in a manner that spans or connects different school subjects across many different points. For this reason, ESD is not to be understood as a subject, but as an area of action which must bring together knowledge from different subjects. Thus, ESD cannot replace the subjects, but in many ways builds on pre-acquired knowledge, enriching it, expanding it and setting it in new contexts. Of course, the problem issues that ESD tackles also provide a point of entry for acquiring in-depth knowledge of individual subject areas (such as geography, science, politics, economics and ethics).

2. Competence Areas of Education for Sustainable Development

By the time they complete secondary education, pupils should possess competencies in dealing with problems and processes of sustainable and non-sustainable development. Competencies are to be understood as 'cognitive skills and abilities which the individual possesses or can learn, allowing them to solve certain problems, as well as the attendant motivational, volitional and social skills and abilities required to be able to apply these solutions successfully and responsibly in a range of situations' (Weiner 2001, p.27)¹.

Education for sustainable development (ESD) particularly serves the acquisition of ***Gestaltungskompetenz*** ('shaping competence'). *Gestaltungskompetenz* describes the ability to apply knowledge of sustainable development and to identify the problems of non-sustainable development. This means drawing conclusions on environmental, economic and social developments in their interdependence, on the basis of analyses of the present and studies of the future, and then using these conclusions to take decisions and understand them before implementing them individually, jointly and politically. Through this process, sustainable development processes take material form.

Gestaltungskompetenz can be broken down into **ten part-competencies**: **1.** To create knowledge in a spirit of openness to the world, integrating new perspectives; **2.** To think and act in a forward-looking manner; **3.** To acquire knowledge and act in an interdisciplinary manner; **4.** To be able to plan and act in cooperation with others; **5.** To be able to participate in decision-making processes; **6.** To be able to motivate others to become active; **7.** To be able to reflect upon one's own principles and those of others; **8.** To be able to plan and act autonomously; **9.** To be able to show empathy for and solidarity with the disadvantaged; **10.** To be able to motivate oneself to become active.

As a reference framework for the characterisation of *Gestaltungskompetenz*, the OECD's concept of 'key competencies' has been selected, as it is international in scope and also of great importance for education policy and planning. The OECD does not only initiate and conduct the PISA tests, but also provides the reference framework for modern competencies. In future, the OECD's key competencies should serve not only as the basis for testing instruments such as PISA, but should also provide guidance on the definition of learning processes in modern, democratic socie-

¹Weinert, F. E.: Vergleichende Leistungsmessung in Schulen – eine umstrittene Selbstverständlichkeit, in: Weinert, F. E. (Ed.): Leistungsmessungen in Schulen, Weinheim and Basel 2001, pp. 17-31

ties which are subject to globalisation and aiming for sustainable development processes. The OECD differentiates between three categories of competencies: one category contains key competencies for the 'interactive use of tools' (such as knowledge, media, and resources); a second category states the competencies required for 'acting autonomously'; and the third brings together the key competencies for 'interacting in socially heterogeneous groups'.

In some German federal states, however, school curricula and framework plans differentiate between subject competence, methodological competence, social competence and personal competence. Often, these four competencies are described as the four dimensions of an overarching 'action competence'. The present guide does not follow these distinctions, although clear relationships can be found at a more detailed level between this system and the OECD key competencies that we have favoured as a point of reference (see below). The reason we have used the OECD key competencies as our reference framework is based on insights from cognitive psychology. These suggest that there is no such thing as a clearly defined 'subject competence' or 'methodological competence', etc. Rather, competencies are to be understood as 'domain specific'. 'Domains' are to be seen as units of meaning in thematic or content terms which exist in relative independence from other areas of knowledge. This relative independence is not so much the result of a systematic division of separate areas of knowledge from one another – as in scientific disciplines or school subjects – but rather of the cognitive abilities of the learners. When you recall what you have learnt or when you apply it in practice, these memories or actions follow the structure of an academic discipline or textbook – as seems obvious – at least among experts. When an expert level is not reached (as is generally the case in school studies), you are more likely to follow the connotations available from your own memory without any specialist expert knowledge. Domains are dependent on problems being subjectively identified as similar, and on the level of expertise in the area. That means to say that competencies tend to be developed within one area and through problem-solving rather than on a more overarching and abstract level. For example, the ability to present the advantages of using regional products in the school canteen to a school conference does not necessarily lead to an ability to convincingly defend the conversion of a brownfields site into a playground before the local council. In addition, the ability to competently 'interact in socially heterogeneous groups' is not independent of context-specific knowledge: it requires knowledge of the culture, norms and values of the individuals and of the specific groups and institutions in question. Therefore – as strict dividing lines drawn between subject competence, methodological competence, social competence and personal competence might easily suggest – talk of 'generally high subject competence' or 'good social com-

petence' tends to be misleading. Rather, these competence categories primarily describe analytical units that cannot be separated in real contexts (of learning and acting). To this extent, it is important to state which specific competencies are to be fostered or measured.

Even though the OECD's concept of competencies explicitly stresses this context-specific interaction between different dimensions of competencies, if the distinctions in the 'classical' model are observed more closely it is possible to compare it in content terms with the categorisation made in German curricula and framework plans:

Subject competencies comprise

- a) the knowledge and skills acquired in a domain (including facts, rules, laws, terms, definitions – i.e. epistemological knowledge – as well as problem-solving knowledge and other forms of knowledge);
- b) the ability to identify relationships, to understand arguments and explanations and to assess situations;
- c) the application of these skills and knowledge in (everyday) situations.

Methodological competencies comprise

- a) the knowledge and abilities required to apply different forms of learning, and working flexibly for the acquisition and communication of knowledge, opinions and judgements;
- b) evaluating the effectiveness of different learning strategies and applying them;
- c) overcoming and solving problems by appropriate means;
- d) the ability to use different media (texts, images, films, internet etc.) and forms of knowledge acquisition (experiments, future workshops etc.);
- e) the ability to organise one's own learning and work.

Social competencies comprise

- a) being able to communicate and work together with others in varying group configurations and situations;
- b) being able to successfully pursue priority goals together with others;
- c) taking on responsibility, for others and together with others
- d) being able to accept the perspectives of others;
- e) being able to resolve conflicts appropriately and democratically.

Personal competencies comprise

- a) developing and preserving one's own identity or self-conception, based upon self-confidence and self-esteem;
- b) being able to know one's own personality characteristics, to consider them critically and to express them appropriately in given life situations;
- c) developing the ability to arrive at moral judgements, to form opinions and value judgements, and to express these;
- d) being able to deal with religions, worldviews and 'big questions'.

The breakdown of the 'classical' competence concepts shows that these display clear parallels with the OECD competencies and facilitate the compatibility of the guidelines presented here with the categories in widespread use in Germany (c.f. table, below).

At this point, it is to be expressly noted – and not only with regard to the domain-specific acquisition of *Gestaltungskompetenz* – that the acquisition of this competence is not limited to a single subject. Whereas subject learning is of particular importance in weighing up and judging situations for action, the acquisition of experience and *Gestaltungskompetenz* is understood in the following text as a task for the school as a whole: *Gestaltungskompetenz* and school quality in the sense of ESD thus complement one another systematically.

On the basis of an analysis of national and international competence definitions, and on the basis of experiences, analyses and discussions in the context of the Transfer-21 programme, the following breakdown and classification of part-competences of *Gestaltungskompetenz* may be compiled (see next page):

Classical competence terms	Competence categories in line with OECD (2005)	Part-competencies of <i>Gestaltungskompetenz</i>
Subject and Methodological Competence	Interactive use of media and methods (tools) <ul style="list-style-type: none"> ● Ability to use language, symbols and text interactively ● Ability to use knowledge and information interactively ● Ability to use technologies interactively 	T.1 Gather knowledge with an openness to the world and integrating new perspectives T.2 Think and act in a forward-looking manner T.3 Acquire knowledge and act in an interdisciplinary manner
Social Competence	Interacting in socially heterogeneous groups <ul style="list-style-type: none"> ● Ability to maintain good and durable relationships with others ● Ability to cooperate ● Ability to overcome and resolve problems 	G.1 Ability to plan and act together with others G.2 Ability to participate in decision-making processes G.3 Ability to motivate others to get active
Personal Competence	Acting autonomously <ul style="list-style-type: none"> ● Ability to act within the wider context ● Ability to form and implement a life plan and personal projects ● Awareness of rights, interests, boundaries and requirements 	E.1 Ability to reflect upon one's own principles and those of others E.2 Ability to plan and act autonomously E.3 Ability to show empathy and solidarity with the disadvantaged E.4 Ability to motivate oneself to get active

3. Competence Areas of *Gestaltungskompetenz*

The following sections set targets for the part-competencies of *Gestaltungskompetenz* which are to be acquired by pupils by the end of secondary education. These part-competencies are classified in accordance with the OECD competence categories.

Classification on the basis of contents is to be found in the learning opportunities described in point 4.

3.1 *Gestaltungskompetenz* in the context of the competence category 'Using tools interactively' (T)

T.1 Gather knowledge with an openness to the world and integrating new perspectives

Pupils...

- T.1.1 can name the approaches and concepts of sustainable development in government policy and civil society;
- T.1.2 can take on board different perspectives and forms of knowledge (for example, scientific, received and everyday knowledge) to describe global and local (non-) sustainable development phenomena;
- T.1.3 can take on board information from different perspectives to evaluate different (non-) sustainable requirements for action and patterns of behaviour;
- T.1.4 can describe and evaluate cultural and ecological diversity.

T.2 Think and act in a forward-looking manner

Pupils...

- T.2.1 are aware – in a manner appropriate to their lived experience – of methods of research into the future (for example, scenario technique, planning games, future workshops), in order to analyse problems of non-sustainable development and anticipate possible opportunities for sustainable development;
- T.2.2 evaluate and apply the findings of future research in the drafting of sustainable development processes with regard to ecological systems, social justice, economic developments and political action.

T.3 Acquire knowledge and act in an interdisciplinary manner

Pupils...

- T.3.1 can describe and explain the composition, functioning and development of the biosphere;
- T.3.2 can describe and explain relations of interdependence for the characterisation of non-sustainable global development (e.g. by using the syndrome concept);
- T.3.3 can describe overarching concepts of sustainability (e.g. strong and weak sustainability) and can analyse the consequences of these concepts for future development;
- T.3.4 can describe concepts of sustainability in the areas of technology, economics, trade, mobility, land use, construction and housing, consumerism and leisure by using specific examples;
- T.3.5 can describe and explain test criteria for sustainable development (e.g. indicators and auditing procedures);
- T.3.6 can describe and evaluate aspects of globalisation and the perspectives of countries at different stages of development;
- T.3.7 can describe and evaluate the differences between renewable and non-renewable resources and their use (e.g. renewable raw materials, fossil fuels);
- T.3.8 can describe and evaluate concepts and visions of social justice;
- T.3.9 can describe the fundamental human rights and conventions under international law, and are in a position to judge their individual and global significance;
- T.3.10 can analyse and evaluate interdependencies between environment, economics, conflicts, poverty and violence, taking account of historical causes and their consequences in the present.

3.2 *Gestaltungskompetenz* in the context of the competence category 'Interacting in socially heterogeneous groups' (G)

G.1 Ability to plan and act together with others

Pupils...

- G.1.1 can name and analyse different standpoints on sustainability in groups, looking into their underlying justifications, and can resolve controversies democratically in this context;
- G.1.2 can describe prejudices, negative stereotypes and forms of discrimination, and can cite means of common intervention to combat them;
- G.1.3 can name social, economic and political causes of human rights abuses, can work together to formulate possibilities for protecting human rights, and are in a position to present forms of action for

human rights in manner which is appropriate for the addressees and situations in question;

- G.1.4 can plan forms of solidary action to protect the future, taking account of global contexts, and implement these in specific cases.

G.2 Ability to participate in decision-making processes

Pupils...

- G.2.1 describe solidarity and concern for the future of humans and nature as common and societal tasks;
- G.2.2 can demonstrate how cooperative problem-solving can take place in the development of strategies for action in the field of sustainable development;
- G.2.3 can describe and demonstrate negotiation processes on aims and processes of sustainable development in the event of practical and political differences (e.g. in the form of planning games and mediation);
- G.2.4 can constructively overcome differences of opinion and conflicts with regard to issues of (non-) sustainable development.

G.3 Ability to motivate others to get active

Pupils...

- G.3.1 can describe their own and joint successful learning processes in the context of sustainability and demonstrate how these can be used for further learning;
- G.3.2 can describe their own and common motivations for participation in democratic decision-making processes and in action for sustainability;
- G.3.3 can describe and evaluate forms of common involvement in solidarity activities (e.g. against poverty, discrimination, environmental risks).

3.3 *Gestaltungskompetenz* in the context of the competence category 'Acting autonomously' (E)

E.1 Ability to reflect upon one's own principles and those of others

Pupils...

- E.1.1 can describe lifestyles which secure and foster sustainable consumption patterns, environmentally and socially acceptable mobility and leisure, and health;
- E.1.2 know and can justify production and purchasing criteria for products on the basis of environmental, economic and social considerations;
- E.1.3 can discover and evaluate the underlying justifications, forms and effects of their own lifestyles and those of other people and societies on the living and working conditions of other people and on the biosphere.

E.2 Ability to plan and act autonomously

Pupils...

- E.2.1 know and can justify their personal rights, needs and interests, describing their limitations against the background of the aim of achieving sustainable development processes and the rights of others, citing possibilities of standing up for the rights of future generations;
- E.2.2 can demonstrate their own experience of autonomous planning and autonomous action through the realisation of a project on sustainability;
- E.2.3 can create their own life plans from the perspective of sustainability, and can describe personal projects and how these can take shape.

E.3 Ability to show empathy and solidarity with the disadvantaged

Pupils...

- E.3.1 can describe and evaluate ways of taking on individual, social, economic and political responsibility for (non-) sustainable development processes;
- E.3.2 can describe possibilities for showing empathy and solidarity with poor, disadvantaged and oppressed people and communities at both local and global levels;
- E.3.3 can describe possibilities of getting empathy for nature across to addressees, and evaluate the various approaches for their own actions.

E.4 Ability to motivate oneself to get active

Pupils...

- E.4.1 can describe and evaluate their personal responses to dilemmas, uncertainties and open situations;
- E.4.2 can describe their motivations for participating in democratic decision-making processes and in sustainable activities;
- E.4.3 apply self-motivation processes to get involved in sustainable forms of living and management.

4. Learning Opportunities

The development of *Gestaltungskompetenz* requires targeted and methodologically considered support. This, given the broad spectrum of part-competences described, represents a multifaceted teaching task, taking in all areas of the school: teaching in all subjects, learning through project work and opportunities for action on the part of pupils, both inside and outside the school.

To give a clearer overview of the ways in which the development of *Gestaltungskompetenz* can be fostered, the following list of learning opportunities has been compiled. They show learning opportunities that correspond to the various part-competencies. In similar manner to the 'model tasks' that accompanied the educational standards for various subjects formulated by the Standing Conference of Education Ministers, these learning opportunities are not to serve as 'test formats' for trial, but rather as examples to demonstrate the targets set for each of the part-competencies.²

In contrast to the term 'task', which could all too easily give the impression of a one-sided teaching-learning process, the term 'learning opportunity' suggests a cooperative teaching-learning process. They represent opportunities for learning set up by teachers for pupils, which are intended to enable pupils to acquire given competencies in an active and constructive manner.

It is important to remember that these learning opportunities are given as prototype examples. They merely shed a narrow beam of light into the room for manoeuvre available in fostering the development of *Gestaltungskompetenz*. Furthermore, the individual learning opportunities listed are to be seen as sketches or models which generally require or allow for further adaptive and creative work from pupils and teachers for application in practical contexts.

The learning opportunities are described in greater detail at www.transfer-21.de, clicking on 'materials' and then on 'learning opportunities and more'.

² c.f. Kultusministerkonferenz (2004): Bildungsstandards der Kultusministerkonferenz. Erläuterungen zur Konzeption und Entwicklung. Munich: Luchterhand. p. 16f.

OECD Competence Category: USING TOOLS INTERACTIVELY (T)

Competence	Topic	Nr.
T.1 Gather knowledge with an openness to the world and integrating new perspectives Pupils...		
T .1.1 can name the approaches and concepts of sustainable development in government policy and civil society	Climate policy/ Stakeholders	1
T .1.2 can take on board different perspectives and forms of knowledge (for example, scientific, received and everyday knowledge) to describe global and local (non-) sustainable development phenomena	Land use	2
T .1.3 can take on board information from different perspectives to evaluate different (non-) sustainable requirements for action and patterns of behaviour	Global water crisis	3
T .1.4 can describe and evaluate cultural and ecological diversity	Biodiversity	4
T.2 Thinking and acting in a forward looking manner Pupils...		
T. 2.1 are aware – in a manner appropriate to their lived experience – of methods of research into the future (for example, scenario technique, planning games, future workshops), in order to analyse problems of non-sustainable development and anticipate possible opportunities for sustainable development	Climate change (Scenario technique)	5
T.2.2 evaluate and apply the findings of future research in the drafting of sustainable development processes with regard to ecological systems, social justice, economic developments and political action	The future of work	6

T.3 Acquire knowledge and act in an interdisciplinary manner Pupils...		
T.3.1 can describe and explain the composition, functioning and development of the biosphere	Biosphere	7
T.3.2 can describe and explain relations of interdependence for the representation of non-sustainable global development (e.g. by using the syndrome concept)	The global change syndrome	8
T.3.3 can describe overarching concepts of sustainability (e.g. strong and weak sustainability) and can analyse the consequences of these concepts for future development	Renewable raw materials/ Agriculture; Regional products	9
T.3.4 can describe concepts of sustainability in the areas of technology, economics, trade, mobility, land use, construction and housing, consumerism and leisure by using specific examples	Mobility or energy efficiency	10
T.3.5 can describe and explain test criteria for sustainable development (e.g. indicators and auditing procedures)	Sustainability audit	11
T.3.6 can describe and evaluate aspects of globalisation and the perspectives of countries at different stages of development	Global change of ecosystems	12
T.3.7 can describe and evaluate the differences between renewable and non-renewable resources and their use (e.g. replaceable raw materials, fossil fuels)	Electricity providers or alternative energies	13
T.3.8 can describe and evaluate concepts and visions of social justice	Social justice	14
T.3.9 can describe the fundamental human rights and conventions under international law, and are in a position to judge their individual and global significance	Human rights	15
T.3.10 can analyse and evaluate interdependencies between environment, economics, conflicts, poverty and violence, taking account of historical causes and their consequences in the present	Fair trade	16

OECD Competence Category: ACTING IN SOCIALLY HETEROGENEOUS GROUPS (G)

Competence	Topic	Nr.
G.1 Ability to plan and act together with others Pupils...		
G.1.1 can name and analyse different standpoints on sustainability in groups, looking into their underlying justifications, and can resolve controversies democratically in this context	Use of biosphere reserves; Conflicts of use and sustainability (middle Elbe)	17
G.1.2 can describe prejudices, negative stereotypes and forms of discrimination, and can cite means of common intervention to combat them	Discrimination	18
G.1.3 can name social, economic and political causes of human rights abuses, can work together to formulate possibilities for protecting human rights, and are in a position to present forms of action for human rights in manner which is appropriate for the addressees and situations in question	Human rights abuses / Defending human rights	19
G.1.4 can plan forms of solidary action to protect the future, taking account of global contexts, and implement these in specific cases	Fair life – initiatives for fair trade	20
G.2 Ability to participate in decision-making processes Pupils...		
G.2.1 describe solidarity and concern for the future of humans and nature as common and societal tasks	Earth Charter	21
G.2.2 can demonstrate how cooperative problem-solving can take place in the development of strategies for action in the field of sustainable development	Keep Cool	22
G.2.3 can describe and demonstrate negotiation processes on aims and processes of sustainable development in the event of practical and political differences (e.g. in the form of planning games and mediation)	Planning game method	23
G.2.4 can constructively overcome differences of opinion and conflicts with regard to issues of (non-) sustainable devel-	World trade – simulation game	24

opment		
G.3 Ability to motivate others to get active Pupils...		
G.3.1 can describe their own and joint successful learning processes in the context of sustainability and demonstrate how these can be used for further learning	Evaluate pupils	25
G.3.2 can describe their own and common motivations for participation in democratic decision-making processes and in action for sustainability	Agenda 21	26
G.3.3 can describe and evaluate forms of common involvement in solidarity activities (e.g. against poverty, discrimination, environmental risks)	Millennium Development Goals	27

OECD Competence Category: ACTING AUTONOMOUSLY (E)

Competence	Topic	Nr.
E.1 Ability to reflect on one's own principles and those of others Pupils...		
E. 1.1 can describe lifestyles which secure and foster sustainable consumption patterns, environmentally and socially acceptable mobility and leisure, and health	Virtual water; Clothing	28
E.1.2 know and can justify production and purchasing criteria for products on the basis of environmental, economic and social considerations	Orange juice	29
E.1.3 can discover and evaluate the underlying justifications, forms and effects of their own lifestyles and those of other people and societies on the living and working conditions of other people and on the biosphere	Saving energy Energy efficiency	30
E.2 Ability to plan and act autonomously Pupils...		
E.2.1 know and can justify their personal rights, needs and interests, describing their limitations against the background of the aim of achieving sustainable development processes and the rights of others, citing possibilities of standing up for the rights of future generations	Children's rights (local and global)	31
E.2.2 can demonstrate their own experience of autonomous planning and autonomous action through the realisation of a project on sustainability	Media report	32
E.2.3 can create their own life plans from the perspective of sustainability, and can describe personal projects and how these can take shape	Dream house	33

E.3 Ability to show empathy and solidarity with the poor, disadvantaged, weak and oppressed Pupils...		
E. 3.1 can describe and evaluate ways of taking on individual, social, economic and political responsibility for (non-) sustainable development processes	Sustainable forest management	34
E.3.2 can describe possibilities for showing empathy and solidarity with poor, disadvantaged and oppressed people and communities at both local and global levels	Child labour initiatives	35
E.3.3 can describe possibilities of getting empathy for nature across to addressees, and evaluate the various approaches for their own actions	Photo project	36
E.4 Ability to motivate oneself to get active Pupils...		
E.4.1 can describe and evaluate their personal responses to dilemmas, uncertainties and open situations	'Greenpack' dilemma	37
E.4.2 can describe their motivations for participating in democratic decision-making processes and in sustainable activities	Win-win cooperation	38
E.4.3 apply self-motivation processes to get involved in sustainable forms of living and management	Energy saving guide	39

www.transfer-21.de