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US Partnership for Education for Sustainable Development

National Education for Sustainability K-12 Student Learning Standards

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Introduction

The National Education for Sustainability K-12 Student Learning Standards define what K-12 students should know and be able to do to be **sustainability literate**. Included are three overarching **student learning standards** or **essential understandings** followed by a **summary chart** (Table 1) of Education for Sustainability (EfS) **concepts** by K-4, 5-8, and 9-12 grade bands. Grade band concepts are organized by **components** which are directly connected to the three learning standards. Following the summary chart are three individual grade band tables (Tables 2, 3, and 4) that include the EfS concepts with **example performance indicators**. A **glossary of terms** is found at the conclusion of the document.

The Education for Sustainability (EfS) standards were developed by the K-12 and Teacher Education Sector of the U.S. Partnership for Education for Sustainable Development (USPESD) with input from K-12 educators in public, private, and pre-service (teacher education) fields. For more information about the USPESD please visit www.uspartnership.org.

Defining Education for Sustainability

Education for Sustainability or Sustainability Education is a relatively new and evolving field. For the purpose of the USP standards, Education for Sustainability is defined as a combination of content, learning methods, and outcomes that helps students develop a knowledge base about the environment, the economy, and society, in addition to helping them learn skills, perspectives, and values that guide and motivate them to seek sustainable livelihoods, participate in a democratic society, and live in a sustainable manner (McMillan and Higgs, 2003).

Purpose and Intent

This is primarily a guidance document for integrating sustainability concepts into K-12 teaching and learning. The EfS standards can be used to help direct a course of study related to sustainability education. Education for Sustainability is by nature interdisciplinary, and therefore can be readily integrated into core content teaching and learning. Education for Sustainability uses a variety of pedagogical techniques that promote participatory learning and higher-order thinking skills.

Education for Sustainability - Student Learning Standards (Essential Understandings)

EfS Standard 1 – Students understand and are able to apply the basic concepts and principles of sustainability (i.e.: meeting present needs without compromising the ability of future generations to meet their needs).

EfS Standard 2 – Students recognize the concept of sustainability as a dynamic condition characterized by the interdependency among ecological, economic, and social systems and how these interconnected systems affect individual and societal well-being. They develop an understanding of the human connection to and interdependence with the natural world.

EfS Standard 3 – Students develop a multidisciplinary approach to learning the knowledge, skills, and attitudes necessary to continuously improve the health and well-being of present and future generations, via both personal and collective decisions and actions. They are able to envision a world that is sustainable, along with the primary changes that would need to be made by individuals, local communities, and countries in order to achieve this.

Table 1: EfS Grade Band Concepts – Summary Chart			
Component	**K-4**	**5-8** (Building on topics and areas of study in K-4)	**9-12** (Building on topics and areas of study in 5-8)
1.1 Intergenerational Responsibility	• Family • Generations (grandparents, parents, children)	• Responsibility to Future Generations	• Intergenerational Equity
2.1 Interconnectedness	• Relationships • Historical Connections • Sense of Place	• Systems • Interdependency	• Systems Thinking • Cradle-to-Cradle Design
2.2 Ecological Systems	• Connection to Nature • Plants, Animals, Habitats	• Natural Resources (renewable & non-renewable) • Biodiversity • Ecosystems • Ecological Footprint (including Carbon Footprint) • Carrying Capacity • Environmental Stewardship • Nature as Model and Teacher	• Respect for Limits • Respect for Nature • Tragedy of the Commons • Environmental Justice • Biomimicry • Urban Design/Land Management • Natural Capital
2.3 Economic Systems	• Human Needs and Wants (food, water, energy, shelter)	• Equity • Resource Scarcity • Energy Economics • Ecological Economics • Food Systems	• Poverty • Ecosystem Services • Alternative Indicators and Indexes of Progress • Globalization • True (or Full) Cost Accounting • Triple Bottom Line • Micro Credit
2.4 Social and Cultural Systems	• Family and Friends • Personal Identity • Happiness • Fairness • Collaborative Learning	• Cultural Diversity • Multiple Perspectives • Citizenship • Resource Distribution • Population Growth • Quality of Life Indicators • Education	• Human Rights • Social Justice • Peace and Conflict • Multilateral Organizations • International Summits, Conferences, Conventions, and Treaties • Global Health • Appropriate Technology • Governance
3.1 Personal Action	• Setting Goals • Communicating Ideas • Making a Difference	• Personal Responsibility • Personal Footprint Calculation • Critical Thinking • Problem Solving • Project Planning and Action	• Accountability • Lifelong Learning and Action • Personal Change Skills and Strategies
3.2 Collective Action	• Setting Goals • Working Together	• Designing a Sustainable System • Structural vs. Personal Solutions • Democracy • Societal Footprint Calculation • Local, State, and National Sustainability Plans	• Local to Global Responsibility • Community-Based and Societal Level Decision-Making • Public Discourse and Policy • Organizational and Societal Change Skills and Strategies

Table 2: K-4 Grade EfS Concepts – With Example Performance Indicators	
Component	**Concepts and Example Performance Indicator**
1.1 Intergenerational Responsibility	• **Family** - Students analyze their roles and responsibilities in their family. • **Generations** (grandparents, parents, and children) - Students draw and label their family tree indentifying different generations. Students understand how their actions today may affect other generations; they take action to minimize negative impacts on future generations (service-learning projects)
2.1 Interconnectedness	• **Relationships** - Students interact respectfully with others, including those with whom they have differences. • **Historical Connections** - Students demonstrate understanding of the concepts of "past", "present", and "future." • **Sense of Place** – Students demonstrate an understanding of place – the natural systems and cycles, the human/cultural context, and the connections between both. At this grade level they focus on developing their sense of place in their immediate community. Example: Students create a story or drawing that demonstrates their understanding and connection to a special place of significant meaning to themselves, their family, and their community.
2.2 Ecological Systems	• **Connection to Nature** – Students, in both urban/sub-urban and rural environments spend time outdoors experiencing and interacting with nature by walking, observing, gardening, etc. They feel comfortable being in the outdoors (e.g.: getting dirty, seeing insects and animals), they see the patterns and connections in nature, and they begin to develop a naturalist intelligence. • **Plants, Animals, Habitats** - Students are able to distinguish between plants and animals and can explain how living organisms interact with the environment in which they live. Students identify food /energy, water, shelter as basic needs of animals and plants. Examples: Students sort local common organisms into animal and plant groups. They design and build a schoolyard habitat for native species, taking into consideration the basic needs of the plants or animals.
2.3 Economic Systems	• **Human Needs and Wants (food, water, energy, shelter)** - Students distinguish between personal wants and needs and identify how culture, marketing, and advertising inform their consumption patterns. Students identify food, water, energy and shelter as basic human needs.
2.4 Social and Cultural Systems	• **Family and Friends** - Students define and develop productive and satisfying relationships with others. They value and know how to help create an atmosphere of mutual respect and kindness. • **Personal Identity** - Students develop a sense of unique worth and personal competence. • **Happiness** - Students have a sense of well-being and understand which factors contribute to their own and other's happiness. • **Fairness** – Students treat others fairly. They develop an understanding that resources need to be shared to meet the needs of living things – across places and generations. • **Collaborative Learning** - Students perform effectively on teams that set and achieve goals, conduct investigations, solve problems, and create solutions (e.g., by using consensus-building and cooperation to work toward group decisions).

3.1 Personal Action	• **Setting Goals** - Students assess their own learning by developing criteria for themselves, and use these to set goals and produce high-quality work. • **Communicating Ideas** - Students use different media to share ideas with diverse audiences. • **Making a Difference** - Students take an active role in their community and feel a locus of control or self-efficacy. Students understand that everyone has the ability to affect change or impact a system, community, and self.
3.2 Collective Action	• **Setting Goals** - Students work cooperatively and respectfully with people of various groups to set community goals and solve common problems. • **Working Together** - Students perform effectively on teams that set and achieve goals, conduct investigations, solve problems, and create solutions (e.g., by using consensus-building, conflict resolution, and cooperation to work toward group decisions). Students use systematic and collaborative problem-solving processes, including mediation, to negotiate and resolve conflicts. Students respect and value human diversity as part of a multi-cultural society and world.

Table 3: Grade 5-8 EfS Concepts – With Example Performance Indicators	
Component	**Concept and Example Performance Indicator**
1.1 Intergenerational Responsibility	• **Responsibility to Future Generations** - Students analyze and list their roles and responsibilities in their family, their school, and their community -- now and into the future. They demonstrate understanding of the cultural context of intergenerational responsibility (i.e. how some cultures consider and plan for seven generations into the future, etc)
2.1 Interconnectedness	• **Systems** - Students describe the ecological, economic, political, and social systems in their community and can identify leverage points in the system to improve their community • **Interdependency** - Students explain how natural and built communities are part of larger systems (e.g., farms as part of the regional watershed and food systems for cities, a mine as part of the regional economy) and the interrelationships that exist among those systems.
2.2 Ecological Systems	• **Natural Resources** (renewable & non-renewable) – Students investigate the natural systems in their local region and explore how humans have impacted those systems, both positively and negatively. Examples: They identify natural and agricultural resources and where they come from (e.g.: wildlife, fish, plant, rock, water, soil, minerals, sunlight, and air). Students distinguish between natural resources and things made by humans (e.g., sand vs. cement, milk vs. ice cream, wheat vs. bread, sap vs. syrup, wildlife versus domesticated animals). Students describe a resource that will regenerate in their lifetime and identify resources that are finite. • **Biodiversity** - Students explain how the range of species and their habitats within an ecosystem interact and identify the physical environment and processes necessary for that interaction. Example: Students identify plant and animal species of their local region and describe how each species is dependent upon another species in the region through a graphic depiction linking each to at least one other by drawing connecting lines. • **Carrying Capacity** - Students provide an example of the maximum population that an environment can support indefinitely. • **Ecological Footprint (including Carbon Footprint)** - Using standard footprint calculation models, students determine the impact of their lifestyle decisions such as transportation, food, and housing choices. • **Environmental Stewardship** - Students design a restoration plan for a local environment that describes the natural resources, through field-based data collection, and includes the social, economic, and political mechanisms to preserve and enhance the described environment. • **Nature as Model and Teacher** - Students investigate designs and systems in nature that can serve as models for human-created sustainable products, services, and systems.

2.3 **Economic Systems**	• **Equity** - Students compare the distribution of resources between two or more economic classes, and ethnic and cultural groups with in their own community and afar • **Resource Scarcity** - Students analyze the use of a local natural resource (e.g. animal, mineral, vegetable, lumber, fish, and minerals) and consider the resources' ability or inability to regenerate at a sustainable level. • **Energy Economics** - Students survey their own household energy uses, explore opportunities for increased energy efficiency and conservation, and then calculate potential savings over time. • **Ecological Economics** - Students explain how a specific ecological region provides environmental, social and economic value. For example, a healthy rain forest as a storehouse of historical, current, and potential medicines of tremendous social and economic value. When this ecological diversity is gone, so is the economic and social value of its medicinal plants. • **Food Systems** - Students analyze local, national and global food systems, demonstrating an understanding of the differences between industrial farming, factory farming, family farming, organic, and non-organic farming. They study the history of, and debates over, the U.S. Farm Bill, and related concepts including protectionism, free trade, and fair trade in the context of food.
2.4 **Social and Cultural Systems**	• **Cultural Diversity** - Students explore their own cultural identity and the identity of their peers and people in their community and the different views and values that each culture brings to the community. • **Multiple Perspectives** - Students consider an issue or challenge related to sustainability, through a variety of lenses or perspectives and they explain how approaching that issue or challenge from different perspectives may result in different decisions and outcomes. • **Citizenship** - Students explore a range of opportunities for civic engagement, including informed voting, grassroots activism, volunteerism, lobbying, involvement in non-governmental organizations, and working in government. • **Resource Distribution** - Students compare the distribution of a common resource (e.g. money, food) of different groups of people in their own community, region, nation, or world and explain how this resource distribution affects sustainability. • **Population Growth** - Students graph the human population growth of a community over time and investigate how the growth or decline of a population affects a community's social, economic, and environmental sustainability, including factors that may contribute to unsustainable population growth (e.g. lack of access to reproductive health care, lack of education, poverty, and resource scarcity). • **Quality of Life Indicators** - Students define indicators that contribute to their own and their community's quality of life and assess their and their community's quality of life based on these indicators. • **Education** - Students explain how education can impact the sustainable practices of an individual and community.
3.1 **Personal Action**	• **Personal Responsibility** - Students know the difference between actions that they can take themselves and those that require the involvement of other people, organizations, and government. They identify and carry out a personal action that will enhance quality of life in environmental, social/cultural, or economic sectors. • **Personal Footprint Calculation** - Students use an on-line calculator to determine their ecological footprint. • **Critical Thinking** - Students analyze a significant news item (environmental, social/cultural, or economic) and use the "Iceberg Model" to determine the difference between the event (the "tip of the iceberg" – the facts of the situation), patterns (the middle of the iceberg – is it a singular or repeated event?), root causes (the larger base of the iceberg –

	what are the underlying causes of the event or pattern of events?), and solutions (What can be done to positively change the structure of root causes?). • **Problem Solving** - Students identify an issue in their community and analyze it from the perspective of environmental, social/cultural, and economic concerns, brainstorm root causes, identify stakeholders, and design a solution. • **Project Planning** - Students create a flow chart, timeline, or some other type of graphic organizer to identity these components of a poster and action project: issue/topic, resources, research, poster mock-up, final poster assembly, poster presentation, and action or service towards a solution.
3.2 **Collective Action**	• **Designing a Sustainable System** - Using a Venn diagram, students log environmental, social, and economic impacts of a service or system that they use (e.g. transportation of food product). Then students brainstorm a more effective "cradle to cradle" life cycle for the system or product that is effective in terms of reusing or recycling technical nutrients and returning biological nutrients to nature. • **Structural vs. Personal Solutions** - Students identify a problem that they cannot solve through personal action alone (e.g. designation of an unused green space for protection and public use or a vacant lot for a skateboard park), research related issues (e.g. zoning, safety, improvements and maintenance expenses), then conduct a letter writing campaign and make a presentation to public officials (e.g. planning commission or city council). • **Democracy** - Students participate in a simulation to devise a national energy policy through negotiation, collaboration, and coalition building among three groups that make a democratic society: the state, civic organizations, and business. They explain how the practices of a democratic society can contribute to local and global sustainability. They participate as active citizens in the democratic process in the interest of sustainability, using a systems approach to make their actions more effective. • **Societal Footprint Calculation** - Students use an on-line tool (e.g. www.worldmapper.org) to examine graphic depictions of the relative footprints of different nations, first for overall ecological footprint, and then in specific areas (e.g. carbon emission, caloric consumption, wealth, house size, etc.). • **Local, State, and National Sustainability Plans** - Students participate in a simulation of the process that is used to develop local, state, or national sustainability plans. They develop a sustainability plan for their school to adopt more sustainable practices and then discuss how that compares to the development of governmental or community-based plans.

Table 4: Grade 9-12 EfS Concepts – With Example Performance Indicators

Component	Concept and Example Performance Indicator
1.1 Intergenerational Responsibility	• **Intergenerational Equity** - Students forward an ethical argument on how sustainable resource use today can lead to basic human needs (e.g.: food, water, energy and shelter) being met for future generations (e.g.: 100 years in the future).
2.1 Interconnectedness	• **Systems Thinking** - Students identify an unsustainable system (e.g.: apartheid, colonization. fossil fuel energy) and redesign it using systems thinking principles (e.g. long-term, interconnectedness, leverage points). • **Cradle-to-Cradle Design** - Students explain the continuous cycling of biological and technical nutrients for a cradle-to-cradle designed product or system.
2.2 Ecological Systems	• **Respect for Limits** - Students collect data in order to investigate and analyze how personal consumption patterns affect the sustainability of natural and human communities. • **Respect for Nature** - Students participate in outdoor education activities to explore and experience the natural environment and enrich their connection with and appreciation for nature. They read nature-related poetry/writings and discuss and compare the authors' styles and impact on themselves and society.. • **Biomimicry** - Students design a product or service to address a problem or issue using one or more characteristics from a plant or animal. • **Tragedy of the Commons** - Students identify local and global "commons", choose one "commons" and debate with their peers the question, "How can this commons be managed in a way that ensures future generations have the opportunity to use and enjoy it, indefinitely?" • **Environmental Justice** – Students identify an environmental justice issue in their community (e.g. location of toxic waste facility in poor neighborhood) and write an article (or blog) for the school or local paper that includes possible solutions to remedy the injustice.. • **Urban Design/Land Management** - Students develop a sustainable land-use plan for an un- or under- developed property or place in their community that provides for a healthy environment, economy, and society. • **Natural Capital** – Students identify the natural capital of a local or global resource and create a graph depicting their relative worth.
2.3 Economic Systems	• **Poverty** - Students explain the history, causes and potential solutions to poverty in the U.S. and around the world through using the context of the United Nations Millennium Development Goals. • **Ecosystem Services** - Students choose an ecosystem and list the existing and potential services (products and processes) that it provides to humans. • **Alternative Indicators and Indexes of Progress** - Students investigate, use, and compare alternative indicators of social and economic progress (e.g. Genuine Progress Indicator) with traditional economic indicators (e.g. Gross Domestic Product) to determine the health and well-being of their local community. • **Globalization** - Students describe the pros and cons of globalization and how a globalized world contributes to and detracts from sustainability. • **True (or full) Cost Accounting** - Students choose a product or service and list its hidden social and environmental

	costs. • **Triple Bottom Line** - Students conduct an analysis of a business operation in terms of environmental, economic, and social/cultural factors. • **Micro Credit** - Students investigate a micro-credit organization's operations in a community and analyze how that operation contributes to the community's long-term sustainability.
2.4 **Social and Cultural Systems**	• **Human Rights** - Students examine the 1948 United Nations Universal Declaration of Human Rights, comparing this document to the United States Bill of Rights, answering the question, "Which rights from the U.N. Declaration are included in the U.S. Bill of Rights, and which are not explicitly addressed? • **Social Justice** - Students research a non-profit group or non-governmental organization whose mission it is to forward social justice, economic opportunity, or civil rights for a particular group of oppressed, excluded, or under-represented people, identifying the organization's mission, key programs, and accomplishments. • **Peace and Conflict** – Students participate in a conflict resolution activity focused on a personal or school-related conflict. They then apply that knowledge and experience to a global conflict. • **Multilateral Organizations** - Students research and compare the goals and programs of three multilateral organizations, one economic (OPEC: Organization of the Petroleum Exporting Countries), one environmental (Greenpeace: a global, public interest group dedicated to a world where people live peacefully in ways that allow the natural environment to sustain itself), and one social (UNESCO, the United Nations Educational, Scientific and Cultural Organization that promotes education, social and natural science, culture, and communication as a laboratory of ideas and a standard-setter to forge universal agreements on emerging ethical issues). • **International Summits, Conferences, Conventions, and Treaties** - Students research and compare the goals, programs, and/or outcome documents or action plans that resulted from three United Nations international summit processes, global conferences, or conventions and treaties – along with the proposals from the accompanying civil society forums. • **Global Health** - Students examine strategies to curb malaria, comparing the economic and health efficacy of low cost preventative measures such as mosquito nets with more costly pharmaceutical research and treatment efforts. • **Appropriate Technology** - Students study a developing country to answer the question, what will achieve greater health, longevity, and sustainable development: basic technologies such as potable water systems and cell phones, or high technology such as personal computers and on-line services? • **Governance** - Students demonstrate their understanding of how authority is exercised in different countries under different forms of government. They understand that good governance in the U.S. includes a transparent and interactive system of government sector, business/private sector; and public/community sector. They actively participate in some aspect of local governance (e.g. attending and testifying at a city council meeting or registering voters).
3.1 **Personal Action**	• **Personal Responsibility** - Students identify and commit to a personal sustainability action and they write about the results of that action. (e.g.: using public transportation, reducing and recycling). • **Accountability** - After completing a thorough ecological footprint or product trail assessment of a product or service that they use, students identify alternate products or strategies for more responsible use. They develop a means for measuring the net progress of the product or strategy alternative.

	• **Lifelong Learning and Action** - Students write their own "story of learning" in which they describe how best they learn and move to action, where they learn and act both in and outside of school, and their strengths as a learner and doer. • **Personal Change Skills and Strategies** - Students identify what systems and strategies work best at self-motivating planning and action for effective personal change.
3.2 Collective Action	• **Local to Global Responsibility** - Student describe the difference between a local and global problem, how the problems might be connected and how a potential solution to each could require different actions (at different levels – ranging from the local to the global). Students then take at least one action and analyze the results and lessons learned for future actions. • **Community-Based and Societal Decision-Making** - Students actively participate in local community-based and national and/or international decision-making focused on sustainable development. • **Public Discourse and Policy** - Students communicate their ideas in a public discussion or debate about a topic that furthers local and/or global sustainability, take action on that topic, and reflect upon the results. • **Organizational and Societal Change Skills and Strategies** - Students identify skills and strategies required to create effective group change for a given issue, take action on that issue and then reflect on lessons learned regarding change strategies.

Glossary of Terms

A
accountability - The acknowledgment and assumption of responsibility by an individual or an entity for actions, products, decisions, and policies.

alternative indicators and indexes of progress - Alternative indicators empirically study and track social issues such as sustainable development and environmental degradation; and address the problems encountered in the use of Gross Domestic Product as a normative indicator (also see "quality of life indicators").

appropriate technology - Technology that is designed with special consideration to the environmental, ethical, cultural, social, and economical aspects of the community it is intended for.

B
biodiversity - The range and interaction of species and their habitats within an ecosystem and the physical environment and processes necessary for that interaction.

biomimicry - Designing products, services, and industrial systems to mimic biological design and cycles found in nature (also see "nature as model and teacher")**.**

C
carrying capacity - The maximum population that an environment can support, indefinitely.

community-based decision-making - A decision-making process in which community members gather information and take the lead in setting policies for the development of their own community.

cradle-to-cradle design - A product design method in which all material components are put back into service perpetually, therefore resulting in no waste product(s). Input and outputs are seen either as technical or biological nutrients. Technical nutrients can be recycled or reused with no loss of quality and biological nutrients are composted or consumed.

critical thinking - An essential tool of inquiry that involves interpretation, analysis, evaluation, inference and synthesis, as well as explanation of the evidential, conceptual, methodological, or contextual considerations upon which that judgment is based.

cultural diversity - The cultural differences that exist between people, such as language, dress, and traditions, and the way societies organize themselves, their conception of morality and religion, and the way they interact with the environment.

D
Democracy - A form of government in which the supreme power is vested in the people.

E
ecological economics – An interdisciplinary field of academic research that addresses the metric of interdependence between human economies and natural ecosystems (also see "true cost accounting").

economic globalization - The integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, and the spread of technology (also see "globalization").

ecological footprint (including carbon footprint) - The total area of productive land and water required, on a continuous basis, to produce the resources consumed, and to assimilate the wastes produced, by that population, wherever on Earth the land (and water) is located. Carbon footprint is the amount of carbon emissions generated by individuals, businesses, or nations.

ecosystem services – The benefits humans derive from resources and processes that are supplied by natural ecosystems. These benefits include products (e.g.: clean drinking water) and processes (e.g.: decomposition of wastes) (also see "natural capital").

ecosystem - A community of living organisms and the environment in which they live, interacting to form a whole functional system.

energy economics - A broad scientific subject area which includes topics related to supply and use of energy in societies.

environmental justice - The equitable treatment of all people, in relation to environmental health regardless of race, income, or class (also see "equity").

environmental stewardship - Caring for and making decisions in the best interest of the environment that supports all life.

equity - The state, quality, or ideal of equality and justice between economic classes, ethnic and cultural groups, and the fair distribution of resources (also see "environmental justice").

G

global health - Health issues and concerns that transcend national boundaries, may be influenced by circumstances or experiences in other countries, and are best addressed by cooperative actions and solutions.

globalization - The transformation of local or regional phenomena into global ones. It is a process by which a combination of economic, technological, socio-cultural, and political forces unify people of the world into a single society that functions together (also see "economic globalization").

governance - The exercise of authority in a country. The capacity to formulate, implement and enforce public policies. Good governance involves the collaboration and negotiation of government, the private sector, and the public.

H

habitat - The place or environment where a plant or animal naturally or normally lives and grows.

human rights - The basic entitlement accorded to every human being. The rights include the right to health, education, shelter, employment, property, food, and freedom of expression and movement.

I

intergenerational responsibility - The extent to which one takes responsibility for the effect(s) of her/his actions on future generations.

intergenerational equity - Consideration of the fairness and justice associated with an individual's or a government's action on subsequent generations (also see "equity" and "environmental justice").

international summits, conferences, conventions, and treaties - Examples of summits, conferences, conventions, and treaties include: Millennium Declaration from the 2000 Millennium Summit and the Peoples Agenda from the Millennium NGO Forum; the 2005 Heads of State Summit Conference and June Civil Society Forum; the International Criminal Court; the World Summit on Sustainable Development Plan of Implementation from Johannesburg in 2002; the Rio de Janeiro Earth Summit Conference and Conventions on Climate, Bio-Diversity, and Combating Desertification from 1992; the Earth Charter; the Cairo Population Conference of 2005; the UN Habitat Conference of 2006; the Beijing Conference on the Rights of Women; and the Convention on the Rights of the Child.

L

lifelong learning - A broad concept where education that is flexible, diverse and available at different times and places is pursued throughout life.

M

micro credit - The business or policy of making small loans to poor people for entrepreneurial (business) projects.
multilateral organizations - Organizations formed between three or more nations to work on issues that relate to all of the countries in the organization.

N

natural capital - The resources of a natural ecosystem that yields a flow of valuable ecosystem goods and services in the future. It is the extension of economic capital to environmental goods and services (also see "ecosystems services").
natural resources (renewable & non-renewable) - Naturally occurring substances that are considered valuable in their relatively unmodified (natural) form. A renewable resource is a natural resource that can be replenished by natural processes at a rate comparable or faster than its rate of consumption by humans or other users. A non-renewable resource is a natural resource that cannot be re-made, re-grown, or regenerated on a scale comparative to its consumption.
nature as model and teacher - The concept in which the Earth's living systems offer designs and models from which humans can learn in regard to designing products, processes, and systems (also see "biomimicry").

P

personal footprint calculation - A method of calculating the ecological footprint (area of the Earth's productive surface necessary to support a particular lifestyle) of an individual (also see "ecological footprint").
population growth - The change in population over time, primarily referring to humans.
public discourse and policy - Written or spoken communication or debate in a community setting and the policies that are developed by a community or government.

Q

quality of life indicators - Statistics of well-being that go beyond traditional economic indicators to include social and environmental factors (also see "alternative indicators and indexes of progress").

R

resource distribution - The way in which resources are distributed to or accessed by people to meet their needs and wants.
resource scarcity - A state in which there is an insufficient amount of resources to meet human needs and wants.
respect for limits - Living within nature's means by preventing waste, pollution, and, unsustainable resource depletion.
rubric - A scoring tool that lists the criteria for a piece of work (for example, purpose, organization, details, voice, and mechanics could be considered the criteria for a piece of writing); it also articulates gradations of quality for each criterion, from excellent to poor.

S

sense of place - Connecting to and valuing the places in which one lives or visits. Those things that add up to a feeling that a geographic location or community is a special place, distinct from anywhere else.

social justice - The concept in which justice is achieved in every aspect of society, rather than merely the administration of law. Affording individuals and groups fair treatment and an impartial share of the benefits of society (also see "equity" and "environmental justice").

societal footprint calculation - A method of calculating the ecological footprint of a group of people (e.g. city, region, or country) (also see "ecological footprint").

structural vs. personal solution - A way of addressing problems through systemic, long-term change. Structural solutions are usually those that address the underlying cause of a problem or issue and are typically addressed by a large body either government, organization, or community as opposed to a solution enacted by an individual.

sustainability and sustainable development - Meeting present needs without compromising the ability of future generations to meet their needs. Sustainability is a holistic approach to living and problem solving that addresses ecological health, social equity, and economic prosperity for present and future generations.

system - A group of interacting, interrelated, and interdependent components that form a complex and unified whole. A system is a collection of "things" in which the whole is greater than the sum of its parts. Some systems are "nested" within larger systems (e.g. the circulatory system is nested within the human body system).

systems thinking - An approach to problem solving that involves the considerations of systems; interconnectedness; the whole versus its parts; respect for limits; unexpected consequences; and, identifying patterns, root causes, and leverage points for change.

T

tragedy of the commons - A conflict over finite resources between individual interests and the common good. The term derives originally from a comparison noticed by William Forster Lloyd with medieval village land holding in his 1833 book on population. It was then popularized and extended by Garrett Hardin in his 1968 Science essay "The Tragedy of the Commons."

triple bottom line - Meeting current and future needs in consideration of environmental, economic, and social/cultural factors.

true (or full) cost accounting - The real costs of products and services that take into account environmental and social impacts (also see "natural capital").

Citation:
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