

Teaching a Sustainable Lifestyle with the Earth Charter

Guideline for Second Cycle Teachers
of Basic General Education



Decade of Education for Sustainable Development: 2005-2014

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c. The Earth Charter Initiative

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Preface

Since the middle of the twentieth century, human activity has caused the Earth to suffer significant environmental changes and inflicted a deterioration of its natural resources. The combustion of fossil fuels, deforestation, and solid waste contamination, amongst other causes, have deteriorated the ozone layer, the Earth's capacity to regenerate its resources, and the quality of life for all.

In 1972, as a first effort to respond to these problems, the "United Nations Conference on the Human Environment" with the theme "Only One Earth" was held in Stockholm Sweden. Here, the international community recognized the indispensability of environmental education and recommended that an international program of interdisciplinary environmental education be developed.

Thus began the environmental education conversation, a tool for achieving change and improving natural resource management.

After this first meeting, others followed in Belgrade (1975), Tbilisi (1977), Rio de Janeiro (1992) and most recently in Johannesburg (2002). The importance of environmental education was emphasized at each one of these, and since Johannesburg, education for sustainable development has been specifically highlighted. The Earth Charter has become a transcendental instrument for this effort, improving the quality of life for all human beings.

In light of the above, the Ministry of Education has incorporated crosscutting themes into its curriculum of, with the aim of creating well-rounded students with high values, capable of living in a world being shaped by globalization, the information technology revolution, and critical global problems.

Environmental education, as a crosscutting theme, has become the ideal instrument for building an environmental culture that favors sustainable human development in harmony with our surroundings.

It was in this conceptual framework that the Decree for a "National Strategy for Environmental Education" was declared. This provided a means to foster a culture of environmental conservation, protection and restoration in students and to promote the continual improvement of environmental, cultural and social conditions in the immediate surroundings of our schools.

To realize these objectives, the Decree requires each Regional Director to develop a strategic environmental plan which places respective regional issues into context. These strategies must be rooted in the following themes: environmental conservation, protection and restoration; preventing and mitigating the impact of human activity on the environment; respecting all forms of life; and sustainable human development.

This Guideline was created in order to help teachers implement this national strategy and to achieve the objectives of the crosscutting theme "Environmental Culture for Sustainable Development". This Guideline also aims to instill important values in students - including respect, love, communication, and tolerance - which have been lost over time. Initiatives like these will help create a more enjoyable country for us to live in.

Manuel Antonio Bolaños Salas
Minister of Education

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Introduction

Considering education as the key to advancing sustainable lifestyles, the United Nations declared the period between 2005 and 2014 as the Decade of Education for Sustainable Development. This Guideline is the result of a combined effort from various institutions and individuals who, in addition to advocating for this Decade, are united by the Costa Rican governmental plan *Re-launching Costa Rican Education*, which encourages educational programs that create a culture for sustainable development.

This current Guideline is geared toward teachers of primary education, especially for the Second Cycle of Basic General Education. It uses the Earth Charter as an educational tool and incorporates its values and principles of creating a more just and sustainable world. It offers various techniques and activities for teachers to put the crosscutting theme “Environmental Culture for Sustainable Development” into practice. This theme, defined and endorsed by the Superior Council of Education, covers:

- Sustainable Human Development
- Respecting all Forms of Life
- Environmental Conservation, Protection and Restoration
- Preventing and Mitigating the Impacts of Human Activity

Furthermore, this Guideline attempts to promote educational programs which will drive the formation of attitudes, aptitudes and behaviors based on a respect for nature, human rights, economic justice and a culture of peace. This Guideline also contains complementary material directed toward the Second Cycle student, with the purpose of strengthening and deepening established themes.

We hope this tool will inspire you to develop new educational activities and encourage positive change in your personal, professional and community life.

Objectives of this Guideline

- Facilitate the incorporation of the crosscutting theme “Environmental Culture for Sustainable Development” into the educational processes.
- Present the Earth Charter as a tool in sustainable development education.
- Suggest activities which allow students to learn about and use the values and principles of sustainable development.

Chapter I: General Concepts

In order to achieve the fundamental changes required by the challenge of sustainability, it is necessary to have an education system oriented toward individual and collective responsibility, as well as toward understanding human beings as part of the interworkings of our planet. This education must promote relationships which create respect and care between human beings and the natural world and encourage new types of development which are more environmentally and socially responsible.

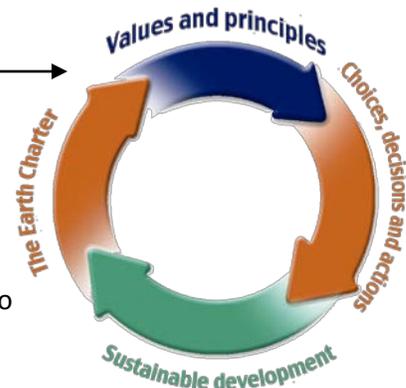
Incorporating sustainable development concepts into the education process implies surpassing the conventional fragmented approach to education by means of action and reflection which drive an integrated and holistic vision. Educating for a sustainable lifestyle requires taking the perspectives of various disciplines and the current reality of students into consideration.

An integrated education scheme involves academic, social, economic, spiritual, environmental and cultural aspects. In order to identify and analyze the various problems on our planet, educators must approach the teaching-learning process interdisciplinarily. This will foster a critical and responsible consciousness and create “attitude changes” reflected by concrete actions in the individual, family and community realms. In this way, students can learn to understand and internalize the true value of biological diversity and cultural traditions, amongst others.

In this same way, students will be able to differentiate the concept of “development”, which has a consumeristic point of view, from that of “sustainable development”, which looks toward the future with care and respect and takes responsibility for the wise use of natural resources.

In light of the above, this Guideline promotes the Earth Charter as an education tool, whose values and principles shape and motivate actions which will drive a true sustainable development.

This diagram illustrates the proposed methodology for the classroom:



Values and Attitudes Education

The Ministry of Education’s National Program on Values and its National Strategy for Environmental Education uses integrated education schemes to develop students’ individual and social potential. This facilitates the students’ complete and satisfactory integration into their environment in order to achieve a better quality of life.

Values education must be a systematic, interdisciplinary and constant process, which transcends the formal curricula and involves the entire school community. It aspires to create and develop conscientiousness in students and to guide them toward forging projects for sustainable living.

It is important to recognize that we are beings which are constantly changing. Even though we cannot always control or change our life circumstances, we can still at least make changes in ourselves and in our attitudes. We can also choose actions which are based in values and principles that improve our relationship with the environment.

Changing our attitudes means modifying the way we think and the way we see and perceive things. This is achieved through increasing knowledge and raising awareness. Developing values implies practicing ethical actions which improve the relationship between and amongst individuals and their environment. This accomplishment requires a greater coherence between our values and attitudes.¹

¹ Ayala Rubio, Silvia: Research Professor at *Guadalajara* University’s Department of Education Studies.

"The choice is ours: form a global society to care for Earth and one another or risk the destruction of ourselves and the diversity of life. Fundamental changes are needed in our values, institutions, and ways of living. We must realize that when basic needs have been met, human development is primarily about being more, not having more."

Preamble of the
Earth Charter

Clarifying Definitions

What are values?

A value is defined as something worthy of praise and admiration or useful for a determined end. In general, values are the foundation for our decision-making. Culture, family, religion and the times directly influence our values. Some examples of values are justice, equity and respect.

What are principles?

Principles are created by values, and they establish standards of conduct. Often values and principles are used in conjunction, almost synonymously.

What are ethics?

The word ethic is derived from the Greek word *ethos*, which means the place where one lives and the common characteristics or behaviors of a group. It represents a combination of values and rules which guide individual and social behavior and conduct. Ethics is an indicator of whether our actions are correct, acceptable or incorrect.

An ethical response arises when we are worried about the consequences of our actions, and this makes us consider what is correct or incorrect in the moment of decision-making. It is important for each individual to consistently apply ethics, since each of us make daily life decisions that influence our environment.

What is sustainable development?

This concept affirms that social problems are linked to environmental and economic ones. Similarly, local, national and international problems are interrelated. Therefore, the search for solutions to these problems requires an integrated approach.

The most common definition of sustainable development was drafted in 1987 by the World Commission on Environment and Development (Brundtland Commission) and states:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."²

Solicited by the United Nations, this World Commission prepared a report called *Our Common Future*, which encourages governments to

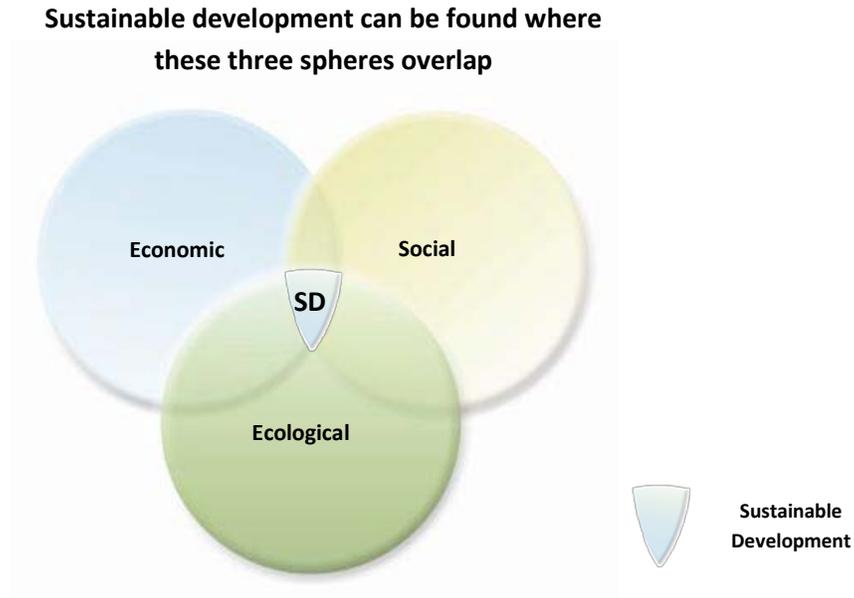
How can you teach this message to students who are growing up in a consumer-oriented, materialistic world, in which your very identity is defined not by who you are but by what you wear, the house you live in, the car you drive, the holidays you take. What is it that lies behind this absolute warping of moral values?*

John Fien

² Global Commission on Environment and Development, *Our Common Future*, (1998), *Alianza Editorial*, Madrid. p. 29.

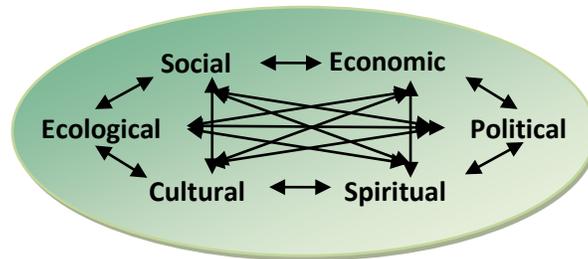
* Fien, John. Centre for Leadership and Management in Education, 24th Educational Leadership Series Breakfast Address. Griffith University. Australia. 2003. <http://griffith.edu.au/school/ctl/clme>.

look for new forms of development that are socially, economically and environmentally sustainable. The illustration below demonstrates that decisions and actions should take different perspectives of development into consideration. In other words, decisions should be made at the intersection of these three spheres.



Some definitions of sustainable development have included other elements, like politics and culture, as shown in the following diagram.

The Elements of Sustainable Development and their Interactions



The concept of sustainable development implies recognizing that our planet's resources are limited and that we must also change our attitudes and the human consciousness. Similarly, educational and informational programs must be innovated to strengthen those values which ensure the common good.

“Do not eat the seeds you will need to plant tomorrow's harvest!”

What is the Decade of Education for Sustainable Development?

In 2002, the Japanese government brought a Resolution before the United Nations General Assembly to establish the Decade of Education for Sustainable Development (DESD). This Decade began in 2005, and UNESCO was designated as the agency in charge of carrying out this Resolution.

The goal of sustainable development education is to create a world where everyone has the opportunity to benefit from a high quality education; to learn the values, attitudes and lifestyles needed for a sustainable future; and to realize positive changes in society.

In October 2003, UNESCO's General Conference established the Earth Charter as the ethical framework for sustainable development and an important educational tool for this Decade.

Education for Sustainable Development (ESD)

"Education for Sustainable Development seeks to develop knowledge, abilities, attitudes and values which empower people of all ages to assume responsibility for creating and enjoying a sustainable future.

ESD is fundamentally about values, with respect at the centre: respect for others, including those of present and future generations, for difference and diversity, for the environment, for the resources of the planet we inhabit. Education enables us to understand ourselves and others and our links with the wider natural and social environment, and this understanding serves as a durable basis for building respect. Along with a sense of justice, responsibility, exploration and dialogue, ESD aims to move us to adopting behaviours and practices that enable all to live a full life without being deprived of basics."³

In order to achieve sustainable development, we must remember that:

- Current behavior patterns place our planet's safety at risk.
- Economic development does not take environmental impacts, social relationships or democratic processes into consideration.
- All of us are part of the problem, and therefore we are all responsible for taking part in the solution.

What is the Earth Charter?

It is an ethical framework for understanding the concept of sustainable development. It emphasizes our interdependence and universal responsibility, and it encourages us to improve the relationships we have amongst human beings, the greater community of life, and future generations.

The Earth Charter is a product of a consultation process between cultures and sectors of society, from across the world, on the values and principles shared by humanity.

³ UNESCO. International Implementation Scheme for the Decade for Sustainable Development Education. 2004. p.23.

The ethical vision of the Earth Charter recognizes that environmental protection, human rights, equitable human development and peace are interdependent and closely related.

Today we urgently need to make significant changes in the ways we think and act, and the Earth Charter motivates us to reexamine our values and choose a better path.

The Earth Charter and Education

The Earth Charter serves as a tool in reaching the following goals:

Raising Awareness

Students need to be sensitized to the extent that environmental, social and economic problems are related.

Increasing Understanding

Offer basic information to students so they can develop criteria for increasing their understanding of concepts related to our current problems, and so they can act as agents of change.

Distinguishing Values

In this process, values which favor “sustainable development” are reviewed and depicted.

Identifying Attitudes

Attitudes that favor “sustainable development” should be identified, so these can be ingrained while negative attitudes can be modified.

Participation

The preceding items will facilitate active and responsible participation in solving current problems. This will foster actions which contribute toward the creation of a culture of “sustainable development”.

Crosscutting themes, as affirmed by Rafael Yus, “build the bridge of unification between the scientific and the quotidian. They can become the educational institution’s most valuable asset in creating a rapprochement between important themes in today’s world and those closest to the reality perceived by our students.”⁴

⁴ Yus, Rafael.

CROSSCUTTING AXES⁵

Over recent decades, the way in which environmental education has been carried out has suffered changes similar to those concepts it covers. At first, it was thought that it should be a course rather than a curriculum, with pre-requisites and evaluations similar to other courses. Later on, it was thought that conventional wisdom should be used as a starting point for its development. Currently, with the transversality theory, as Gutierrez, J. (1995) states, crosscutting axes are a sort of underlying framework which should connect together in supporting academic subjects to achieve their objectives, content and methodology (p. 171).

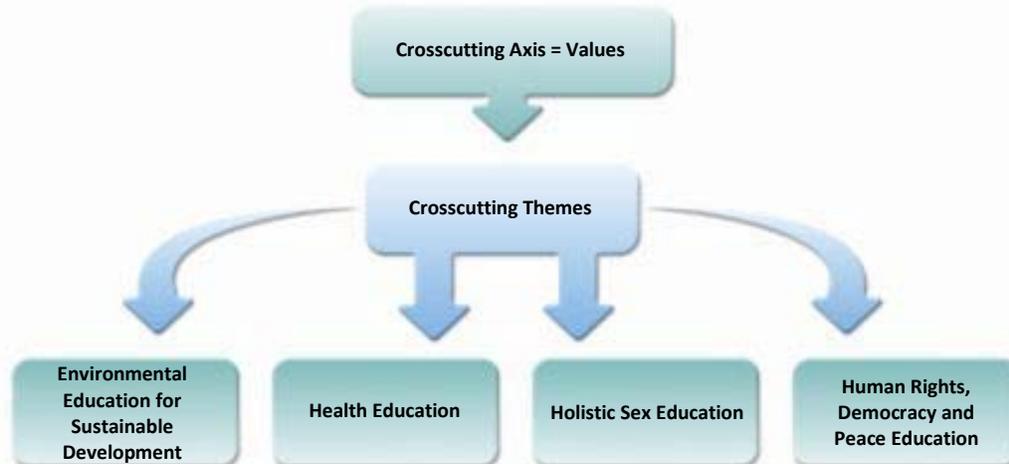
“The axis is a concept taken from mechanics. Similarly, its function can be analogously understood: supporting, directing and allowing movement.

Axes are generic theoretical-methodological schemes that can be used in developing curricula. They are approached using successive approximations reaching profound levels.⁶ Examples: environmental education, peace education, health education, gender, human rights, citizenship, specific aspects related to a professions (professional identity, social studies and policies, ethics associated with human rights and values).”

An axis incorporates diverse themes and identifies the epistemological elements related to acquiring specific knowledge.

Within the transversality theme, crosscutting contents must look into human feelings and social problems where students develop.

Through with the Ministry of Public Education, Costa Rica has defined one crosscutting axis: “values”, from which four crosscutting themes are derived. This is illustrated in the diagram below:

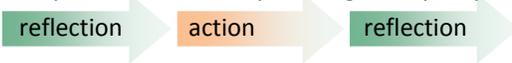


⁵ Rodriguez Morales, Mayra. *Educación ambiental y transversalidad*. BIOCENOSIS, Vol. 17, Nº 1, 2003.

⁶ Approximation: Drawing near systematic what allows nearing to the object in a gradual manner. (Vega, Cecilia. 2000. Personal communication).

Chapter II: Environmental Culture for Sustainable Development

Promoting an environmental culture seeks to generate changes in attitudes, through creating a higher consciousness, and to improve citizen commitment, through their actions and the impact they have on the environment. This is upheld through a sense of responsibility toward the fragility of our ecosystems and toward the impacts that human decisions and actions can create.

“Sustainable development” is not simply a synonym for environmental protection. Rather, it is a process which seeks to find convergence points between the needs of social justice, economics and environmental protection. Incorporating this perspective into the classroom requires exercises which encourage 

The sections of this Guideline offer theoretical content and suggest various practical ways to incorporate the principles of “sustainable development” and the Earth Charter into teaching.

Theme 1 - Sustainable Human Development

This theme discusses various aspects of the human condition, such as how to guarantee work for everyone, health, and public education. The concepts of dignity and equity are fundamental to this theme, since access to the benefits of economic output, as well as to natural resources, needs to be granted with equity. This refers to equity within our current population (intragenerational) as well as between this and future generations (intergenerational).

The Earth Charter

Introduction

Geographically, charter means map, as in the Maritime Charter or the Meteorological Charter. In other words, it is a tool which we use to find out where we are and get ourselves oriented. In the case of the Earth Charter, in addition to being a tool which orients us in our decision-making, it also offers an integrated ethical vision of the current condition of our planet as well as a path to follow for securing a more sustainable future.

The Earth Charter Initiative promotes a process of constant learning and transformation. It invites every individual to reflect on his or her behavior, lifestyle and relationship with the environment, as well as the current status of his or her community, country and the world.

This entails taking individual responsibility to care for our planet and for the wellbeing of current and future generations.

Teachers will be able to use the Earth Charter as an educational tool for explaining the meaning of sustainable development and for furthering the understanding of values and principles related to sustainability.

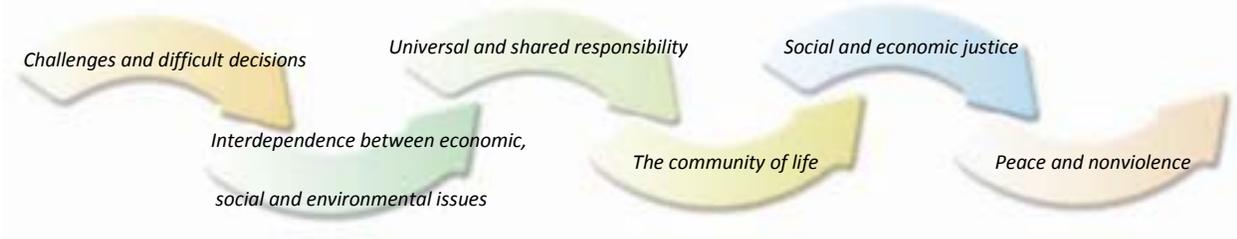
Generally speaking, it is recommended to carry out activities which invite students to reflect on their protagonist role in the process of change and as a key agent in the search for solutions to problems in their community.



The Earth Charter and its Content

The Earth Charter compiles important features of various international documents, action plans and declarations that have been developed over the past thirty years.

Central themes of the Earth Charter



The Earth Charter: Content Summary

The Preamble explains the global situation, the beauty of our planet as well its current problems. It highlights the challenges we face and the choices each one of us can make. Furthermore, it emphasizes the importance of universal responsibility.

The first principle "Respect Earth and life in all its diversity" is the foundation for the following three principles as well the remaining principles in the Charter.

The second, third and fourth principles, found in the Part I of the Charter, deal with the three primary spheres of human relationships and ethical responsibility: the relationship between human beings and the greater community of life, the relationship between human beings and society, and the relationship between present and future generations.

Twelve fundamental principles in Parts II, III and IV describe the meaning of the first four principles in greater detail. The titles of these three Parts - “Ecological Integrity”, “Social and Economic Justice” and “Democracy, Nonviolence and Peace” - demonstrate the inclusive nature of the vision of the Earth Charter.

Sixty-one supporting principles address important issues and clarify the meanings of the sixteen fundamental principles.

You can compare the Earth Charter to a tree: it has roots, a trunk and branches. The initial and most important principles are like the roots, the base for those that follow. There are four of these initial principles, and they can be compared to four parts of the roots. The remaining principles are like the trunk, and the sub-principles are like the branches.

Characteristics of the Teaching-Learning Process

Teachers should realize that the Earth Charter paradigm follows 21st century teaching-learning processes, and therefore need to be:

- Participatory
- Multidisciplinary
- Student-centric (the lead actor in the learning process being the student)
- Reciprocal (teacher-student and student-teacher)
- Framed within the quotidian
- Flexible
- Based in reality and in the local context

Suggested Activities

The Earth Charter is composed of sixteen principles, and each one can be a theme for discussion or interpretation during class. Given that these activities need to motivate the students to internalize some of these values of sustainability, discuss the principles, their meanings and how they are put into practice.

In Spanish, English or Art class, students can express their opinions on the Earth Charter and how they can apply it in their own lives. This can be carried out through discussions, reading comprehension, writing, poetry, drawings, music, theater or other forms of expression.

In Social Studies they can research the history of the Earth Charter and the roles played by the United Nations and by international documents like the Universal Declaration of Human Rights.

Another activity can be giving presentations on the lives of famous individuals like Emma Gamboa, Omar Dengo, Mother Teresa, and 2004 Nobel Peace Prize laureate Wangari Maathai. The point of this exercise can be identifying the values these people demonstrated in their lives. (See box)

EMMA GAMBOA



In 1901, Emma Gamboa was born into a humble family in *San Ramon*. From a very young age, she excelled in mathematics and reading comprehension, but less so in other subjects. She was an avid reader, but due to her economic limitations she borrowed the material she read.

She was motivated and determined to accomplish her dreams and overcome her obstacles. In order to undertake secondary studies, she received a scholarship to go to the recently founded *Escuela Normal* after passing the entrance exam with the highest average.

In 1932 she became the principal of the *Kindergarten*, an annex to the *Escuela Normal*. There, she acquired formal leadership skills. She created stimulating integrated models to help the children harmoniously develop their potential. She was recognized for her work, not only amongst the teachers she worked with, but throughout the entire town of *Heredia*. She was sought after by families to take their children into this new *Kindergarten*. Thanks to her perseverance, in 1958 the Faculty of Education building at the University of Costa Rica was created.

OMAR DENGO



Omar Dengo was born in San Jose (Costa Rica) on March 9, 1888. "Those who knew him in the *Liceo*⁷ *de Costa Rica*'s classrooms said he was an intelligent, clearheaded man with timely, bright ideas. Above all, however, he was known for the grace and elegance with which he dressed and for his charm and friendliness."

At a certain point in his life, he began defending the poor and needy, which were searching for their wellbeing. His vision was to justly provide for the working-class, not out of charity, but out of the duty of the State. Omar Dengo proclaimed, "Our lifework

⁷ *Liceo* means high school.

will be fighting prejudice and defending ideals". He was decidedly concerned for the good of others. He especially fought for universal education and the betterment of the working class. He was a professor at the *Liceo de Costa Rica*, a rural teacher, and a working-class educator at the *Centro Germinal*. He was the principal of Costa Rica's *Escuela Normal* for ten years, and in 1919 his brilliance and accomplishments in this post earned him the title "Teacher of the teachers and educator of the country".⁸

He was greatly interested in everything to do with children and their wellbeing. He strived to cultivate transformations in the spirits and lives of our country's newest generations. In this sense, Omar Dengo was a precursor to the National Children's Welfare Institution and our nation's legislation on the child.

MOTHER TERESA OF CALCUTTA

In order to better respond to the physical and spiritual needs of the poor, Mother Teresa founded the Missionaries of Charity. This Charity was dedicated to serving the poorest people around the world, with hundreds of homes dedicated to the dying, shelters for women and children, and homes for AIDS patients. Over the following years, the world began to notice Mother Teresa and the work she had begun. Her actions reflected a profound sense of love and care for the fellow human being. She was awarded numerous prizes in honor of her work, most notably the Nobel Peace Prize in 1979 which she received with her characteristic humbleness.



The entire life and work of Mother Teresa was a testimony to the joy of loving, to the greatness and dignity of each person, to the values of small things done with fidelity and love, and to the incomparable value of counting on the love of God. She taught us that the greatest poverty is not in the slums of Calcutta, but rather in the richest countries of the world, when love is missing.⁹

The biggest disease today is not leprosy or cancer or tuberculosis, but rather the feeling of being unwanted, uncared for, deserted by everybody. The greatest evil is the lack of love and charity, the terrible indifference towards one's neighbor who lives at the roadside, the victim of exploitation, corruption, poverty and sickness"

-Mother Teresa, M.C.

"Peace and war begin at home. If we truly want peace in the world, let us begin by loving one another in our own families. If we want to spread joy, we need for every family to have joy. ."

-Mother Teresa, M.C.

⁸ *Fundación Omar Dengo*, website: www.fod.ac.cr.

⁹ *Siervas de los Corazones Trapasados de Jesús y María*, www.corazones.org.

WANGARI MAATHAI

Wangari Maathai's life and work serve as an inspiration for millions of people. When she was awarded the Nobel Peace Prize in 2004, this further highlighted the values for which she fought during a critical moment in history. Wangari Maathai was the first woman from Africa to be awarded the Nobel Peace Prize.

She is internationally recognized for her persistent struggles on behalf of democracy, human rights and environmental conservation.

Wangari Maathai shows us, in practice, that peace on Earth depends on our ability to protect the environment in which we live. In 1976, while working for the Kenyan National Council for Women, she developed the idea of planting trees with the public. She continued expanding this idea and eventually founded the Green Belt Movement. Over thirty years, she mobilized poor women to plant thirty million trees. Wangari has always had very clear goals, and she has worked hard to achieve them. Other countries have since adopted her methodologies, because in addition to helping with reforestation, planting trees also provides communities with an alternative source of nourishment. Through education, family planning, nutrition and fighting corruption, the Green Belt Movement has paved the way for development at the grassroots level.

Wangari Maathai uses a combination of science, social commitment, and proactive politics. More than protecting today's environment, her strategy is grounded in creating and strengthening the foundation for sustainable ecological development.



Activity 1 - Developing our own Earth Charter (Spanish and English)

After presenting your students with the principles of sustainable development declared in the Earth Charter (see complete text in the Annex), ask them to draft their own version of the Earth Charter. Then invite the students to make a list of actions they will do over the year to put their version of the Earth Charter into practice. This exercise will help them better understand the meaning of these principles. Furthermore, it will motivate the students to participate in the decision-making process and also provide them with a sense of empowerment in the process.

As a complement to this activity they can make posters and murals in the classroom or school.

The same exercise could include developing a "Personal Plan", where the students:

1. Make a list of the most important values in the Earth Charter.
2. Write a short story about children's rights and responsibilities.
3. Develop a personal plan to put the Earth Charter into practice.

Activity 2 - Understanding meanings

The Earth Charter can be used in English, Spanish or Orientation¹⁰ class. It is suggested that the teacher choose one segment or one principle of the Earth Charter each week and ask the students to:

1. Identify new words and develop a glossary to enrich their vocabulary and deepen their understanding of these words.
2. Choose the most important principles (from the Earth Charter), which can be used to guide their attitudes toward themselves, their community, and their environment.
3. Cite three actions that can be carried out, either at home or school, to fulfill the principles of the Earth Charter.

Activity 3 - My community and I

Using the following questions, students can describe their perception of reality: What is my community like? What values are important in my community? What problems are there in my community and what is my role as an agent of change?

Activity 4 - Reflecting on the way I act

Invite the students to carry out the following reflection exercise:

A. Reflecting on things...

1. Identify two things that you use each day. For example: soap, shoes, shirt, glasses, pen, pencil...
2. Think about what you use them for. Then think about how you take care of them.
3. Identify the primary material needed to produce this object. Where does it come from? Which natural resources were used?
4. Think about how this item was produced. How do you think this production process was carried out? Who do you think took part in this process?
5. Think about when you will no longer need these items. What will you do with them? Where will they go? How will they decompose, or be reused?
6. Which personal values should guide the use and care for these items?

B. Reflecting on someone you love...

1. Identify two important people in your life. Write down their names.

¹⁰ This class is facilitated by a psychologist and covers issues such as values, self-esteem, etc.



2. Think about each of them. What are their qualities?
3. How do you interact with them? What do you talk about? How do you talk to each other?
4. Write down the values and qualities of these two people.

Activity 5 - Game about values and countervalues

When the teacher describes or practices a value, the students must stand up from their seats. When the teacher describes or practices a countervalue, they must sit down. This game should start by using examples from the students' immediate reality (using "I") and then continue with examples from the family, community, country, etc. The point of this game is to improve the students' understanding of the concept of values and principles and to help them internalize this. This game emphasizes the importance of human beings practicing common values, within a framework of responsibility and respect, to facilitate coexistence.¹¹

The Relationship between Population, Environment and Development

Introduction

This theme deals with the relationship between population growth and the demand for resources, which supply needs but also have impacts the environment. Regarding this theme, the Earth Charter specifically states the following:

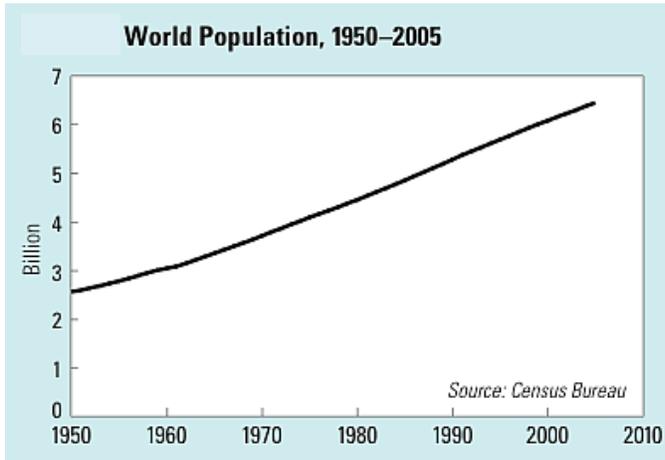
Preamble - The dominant patterns of production and consumption are causing environmental devastation, the depletion of resources, and a massive extinction of species. Communities are being undermined. The benefits of development are not shared equitably and the gap between rich and poor is widening. Injustice, poverty, ignorance, and violent conflict are widespread and the cause of great suffering. An unprecedented rise in human population has overburdened ecological and social systems.

Principle 7 - Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being.

The greater the population of our planet becomes, the more products are required to fulfill our needs. This means that more resources need to be extracted. Furthermore, with the consumeristic lifestyles common to our society, the consequences also include an increase in solid waste. Many production processes are carried out without considering the negative impacts they may have on Earth or how they may affect the regenerative capacity of Earth's natural resources.

¹¹ *Primer Encuentro Nacional de Niños Costarricenses y la Carta de la Tierra, Museo del Niño. 1997.*

It is important to note that from the beginning of history until 1900, world population only reached 1.5 billion inhabitants. However, by 2000 this figure had drastically increased to 6 billion. (See graph)



A moderate and responsible lifestyle can ensure we have long-term access to nature's goods and services.

In addition to the population increase over the past fifty years, global production and consumption have also excessively increased. Due to Earth's limited capacity, this has drastically impacted our ecosystems. Therefore, we should be responsible and change our lifestyles.

Suggested Activities

Possible activities include:

Activity 1 - Reflecting on my lifestyle

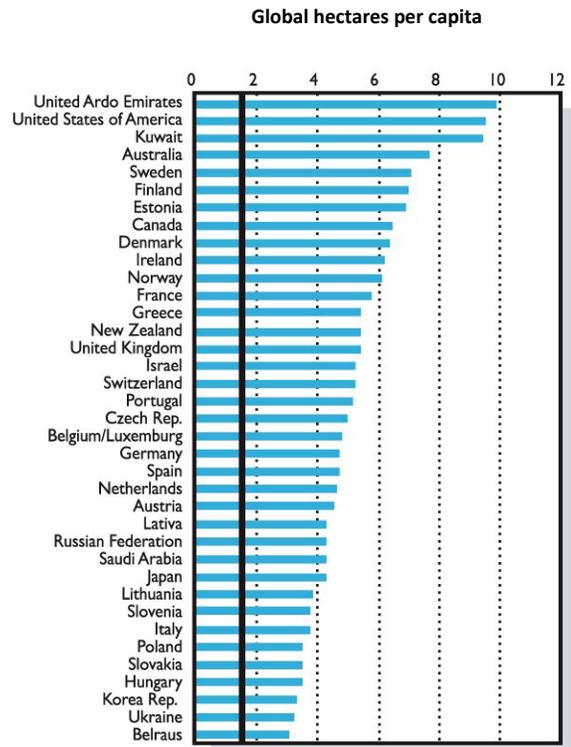
Have your students reflect on their lifestyles as consumers by asking the following questions: What things do I like to buy? What items do I really need? In order to produce these items, what resources are extracted from nature? Are they nonrenewable resources? Have them justify their answers with a short story, drawing, class discussion, etc.

Activity 2 - Reflecting on the relationship between the environment, health and development

Have your students analyze how a certain type of environmental degradation (air or river contamination, using chemical products in agriculture, etc.) can affect human health.

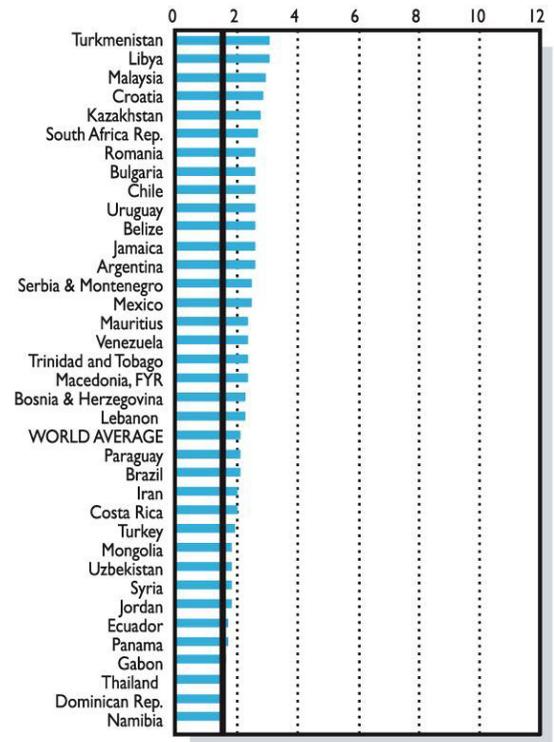
Comparative graph of various countries' ecological footprints

Source: *Global Footprint Network*



Activity 3 - Understanding the concept of an 'ecological footprint'

Share the "ecological footprint" concept with your students. Ask each one of them to measure his or her ecological footprint, and then calculate that of the entire class. After a few months (four months is recommended), you can redo these calculations and observe the variations that have occurred from lifestyle changes.



The Concept of an Ecological Footprint

Have you looked into how many natural resources are needed to maintain your lifestyle?

This question can be answered by using the concept of an ecological footprint, which tells us how many natural resources each person requires according to their consumption habits. An excessive consumer will have a larger ecological footprint and therefore a greater impact on nature. This concept illustrates that more consumeristic populations need to extract more resources from nature.

The concept of an "ecological footprint" calculates how much productive territory (land and water) is required to fulfill a person's needs. It has been estimated that each person needs 1.9 hectares of productive territory.¹² Today however, the average amount of territory used per person is 2.3 ha. Due to the lifestyle in the United States, its inhabitants require an average of 9.75 ha of productive territory per person. If everyone on Earth consumed at this rate, we would need five planet Earths to supply our needs. On the other hand, in Bangladesh, the average ecological footprint per person is 0.5 ha.

For each person with a footprint larger than what is available, another person's ability to enjoy his or her space is limited. Therefore, a change in consumption patterns is needed, particularly by people with purchasing power and by the richest nations of the world.

Do you want to take up the challenge to leave a 'better footprint' on Earth?

¹² Wackernagel, Mathis. Global Footprint Network. <http://www.footprintnetwork.org>.



Do you want to know your ecological footprint?
Go to <http://www.myfootprint.org/> and answer the fifteen simple questions. You can compare your ecological footprint with other people's and with the Earth's ecological capacity.

Quality of Life

*"The search for a better quality of life strives to achieve equality amongst men and women and to satisfy our basic needs, whether these are physical, intellectual, or of a moral, spiritual, cultural or social nature."*¹³

Introduction

Quality of life is the satisfaction level of basic needs and not the quantity of goods one possesses. This means that if a person or family has sufficient food, shelter, clothes, access to education and medical care, and time to rest and do other things, this person has "quality of life".

Quality of life is misunderstood when it is related to the quantity of goods possessed by someone (big house, new car, brand name clothes or unnecessary toys). On the contrary, this implies greater

¹³ Camaño, Carmen and others. *Orientaciones pedagógicas en la educación ambiental para el desarrollo Sostenible. Costa Rica: SIMED. 1995.*

consumption. Advertising has instilled in the public the idea that “the more goods someone possesses, the more important or happier he or she will be”.

The Earth Charter refers to this theme in the following excerpts:

Preamble: We must realize that when basic needs have been met, human development is primarily about being more, not having more. We have the knowledge and technology to provide for all and to reduce our impacts on the environment.

Principle 7f: Adopt lifestyles that emphasize the quality of life and material sufficiency in a finite world.

Often we find sets of circumstances which do not contribute to “quality of life”, such as:

- Increasing poverty
- Air contamination
- Deforestation
- Insecurity¹⁴
- Consumerism
- Solid waste
- No access to medical care
- Unequal educational opportunities
- Disrespect toward forms of life
- Deterioration of the ozone layer
- Water contamination
- Atmospheric contamination

Contrary to the above, there is a set of values and principles which reinforce changes in attitudes that achieve true quality of life. Thus, the teacher can highlight these values and principles through various classroom activities.

Suggested Activities

The following questions can be used in Spanish, English or Social Studies for students to reflect on and internalize the concept of quality of life.

- What does “quality of life” mean?
- What is your lifestyle?
- Describe what your community is like today.
- What will it be like in ten years?
- How would you like to live when you are an adult?

¹⁴ *Insecurity* in this case is referring to urban violence and unsafe living conditions.

- How could you contribute to the wellbeing of others?
- What actions could you take to improve your community?

These illustrations can help explain the “quality of life” theme.



Participation

Introduction

We frequently participate in conversations, celebrations and gatherings. Participation is both a right and a duty for everyone, because it is a way to respond to the need for collaboration and cooperation in our social mediums. It is essential for advancing democracy and “sustainable development”. Society is built and modified through participation.

The democratic process offers room for people to participate in decision making and in building a better society. It ensures a social and political environment where women and men can aptly express themselves and promote human rights, social justice and a healthy planet.

However, many citizens have become apathetic and do not participate in the electoral process or in community or student projects which try to improve the surroundings. In light of this, it is important for teachers, from the classroom, to motivate students to actively participate as agents of change.

The Earth Charter discusses this theme in the following way:

Principle 3: Build democratic societies that are just, participatory, sustainable, and peaceful.

Principle 13: Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making, and access to justice.

a. Uphold the right of everyone to receive clear and timely information on environmental matters and all development plans and activities which are likely to affect them or in which they have an interest.

b. Support local, regional and global civil society, and promote the meaningful participation of all interested individuals and organizations in decision making.

c. Protect the rights to freedom of opinion, expression, peaceful assembly, association, and dissent.

When there is participation in any process, a shared sense of empowerment and responsibility emerges; there is a greater commitment by the individuals participating.



This illustration can help explain the participation theme.

Suggested Activities

- Have your students do some research and explain why participation is fundamental.
- Get the school community and parents involved in recycling and energy and water saving projects.
- During student elections, encourage your students to create or join a political party. Motivate them to develop the Student Government Plan so it includes projects that deal with themes related to “sustainable development”.
- Motivate your students to create an Earth Charter Committee, or a committee on sustainable development, at their school. This Committee could be tasked with promoting and putting into practice the values and principles of sustainability articulated in the Earth Charter.

Cultural and Ethnic Diversity

THE WAY FORWARD: We have a priceless heritage of cultural diversity, and our various cultures find ways of expressing their own identities. We must deepen and widen the global dialogue generated by the Earth Charter, because we have a lot to learn in our joint search for truth and wisdom.

Referencing to the Earth Charter

Preamble: To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace.

Principle 8b: Recognize and preserve the traditional knowledge and spiritual wisdom in all cultures that contribute to environmental protection and human well-being.

Principle 16f: Recognize that peace is the wholeness created by right relationships with oneself, other persons, other cultures, other life, Earth, and the larger whole of which all are a part.

Introduction

Some years ago, people were considered cultured if they were more knowledgeable in world art and history or if they had received a high level of education. This perception caused a misunderstanding and misinterpretation of the term, as it exclusively considered art, music and historic or architectural buildings of a society.

This perception has changed, and it currently considers a combination of various features - spiritual and material, intellectual and emotional - which characterize a society or a social group. It includes the way of life, language, values, beliefs, traditions, expressions, knowledge, and the fundamental rights of human beings. Culture is a legacy of shared ideas, and it is found in memories passed down from one generation to the next. For this reason, all society has an equally important culture.

The nation of Costa Rica has been constructed by various groups. This began with the first indigenous inhabitants some 12,000 years ago. Later the Spanish colonists and other various groups of immigrants (Africans, Chinese, Italians and others) arrived.

Additionally, due to our geographic location, Costa Rica participated in the exchange of ideas and materials between the indigenous cultures of North and South America. From the Mesoamerican tradition, our country inherited agricultural crops such as corn, beans, tobacco and cacao. The Costa Rican Chorotega indigenous group seasoned their meats (turkey (*chompipe*), venison, paca (*tepezcuintle*) and iguana) with squash (*chayote*) seeds, bee honey, and snails. Sapodilla (*zapote*) and loquat (*nísperos*) are native to the Chorotegas, and they traded these with inhabitants from other regions of the country. The cultivation of peach palm (*pejibaye*) and tubors (like yucca), on the other

hand, was inherited from the Andean region. Our people were recipients of cultural influences from the north and south, but they also created a culture of their own.

The Spanish contributions included bread, beef cattle, and horses. The Costa Rican Creole dish (*olla de carne*) is an indigenous and Spanish mixture.

Central America has a rich cultural heritage. This is reflected by its diverse indigenous groups¹⁵: Maya, Xinca, Garifuna, Sumu, Rama, Miskito, Malekus, Cabécar, Bribri, Guaymi, Chorotega, Térraba, Brunca, Kuna and Lenca, amongst others.

Language is another important contribution from these various groups. We have inherited words from Náhuatl like “tomato” from (*xi*)*tomat*, “chocolate” from *xocolâtl*, “coyote” from *coyôtl* and “achiote” from *achiyotl*. Other words of indigenous origin are “nicoya” (path of the warriors), “tilarán” (place of many waters), “pizote” (glutton), “caite”, “caucel”, “Chorotega”, “comal”, “cumiche”, “guanacaste” (the place where the *tree of ears* comes from), “guatil” and “chichicaste”.

Currently, there are several distinct cultures coexisting in certain regions in Costa Rica. For example, in the Atlantic region, we find Chinese, African and indigenous cultures sharing the same geography, landscape and historical process. This results in a unique culture, which is reflected in its music, dance, language, religion, clothes, folklore and food.

Suggested Activities

Activity 1 - Spanish

The teacher can use folk stories from different cultures within the country to introduce its existing cultural diversity. The following is an example:

*A Cabecar*¹⁶ Story: “Mr. Sun and the Hurricane Children”

Cabecar children get up very early in the morning. When Mr. Sun is just beginning to appear, they have hopes of spotting the three small Hurricane Children, the *Sërikë*, who are very naughty.

Every night Mr. Sun goes to bed very tired after a hard day’s work. It is difficult for Mr. Sun to wake up in the morning, but he gets up while covering himself all the way up with clouds. Still, the *Sërikë* manage to find him. Nothing gets by these playful children, and certainly not Mr. Sun.

Our country has a rich culture due to its mixed ancestry.

Distinctive characteristics of various groups have mixed together to form the Costa Rican culture.



¹⁵ In 2000, this was estimated to be between six and seven million people.

¹⁶ *Cabecar*: an indigenous group from Costa Rica.

The smallest one, *Yabá Batástku*, always finds him first. Then the *Sërikë* grab his whiskers, each one on a different side, and they begin pulling on them to get Mr. Sun ready to start his work day. Each one pulls a handful of whiskers on each side and continues pulling them more and more. The more they pull his whiskers, the warmer and brighter it gets. When the sun is completely out, this means they have stretched out all his whiskers.

If you want to see the *Sërikë* tomorrow, you must get up very early, like the *Cabecar* children, and watch how they pull on his whiskers.

Ask your students to read the Cabecar story “Mr. Sun and the Hurricane Children” and think about the following questions:

- Which cultural and ethnic groups are there in your school and community?
- Which elements do each one of these groups bring to our music, language, art, food and to Costa Rican culture overall?

Cultural and National Identity

Introduction

Identity is defined as the conscious state of an individual which recognizes and expresses belonging to a category of people or a community. Identity has strong emotional content which is reflected when customs, values, knowledge, ideas and technology are shared. As such, identity can be local, regional or national.

Cultural identity originates in the historic past. It is an accumulation of experiences. It shares challenges, develops values, and gets transmitted from generation to generation. It constitutes the memory of a people.

National Identity

It must be recognized that national identity is made up of contributions from the various cultures that exist in a country.

History is the foundation for identity. Cultures as well as individuals develop their own identities over time. Even though we can find differences between regions, there are also elements which unite us as a nation. Each nation has a national culture, and people identify with certain elements of these. They accept ethical values, symbols, music, language, sayings and traditions. Identity is built on ideologies, rituals and symbols, such as the national emblem, hymn and flag.

Latin American countries have lost some of their identity and roots, because they have underappreciated their own culture. Globalization has notably exacerbated this phenomenon, as it tends to homogenize cultures and generate a loss of cultural identity.

However, there are also examples of ways that national identity can be passed on and reinforced, such as through schools and museums. These can show people their own roots and help them value their own culture and cultural diversity.

Suggested Activities

Activity 1 - Spanish - Couplets

Couplets are expressions of local folklore, and teachers can use them to motivate their students. They are simple verses that are easy to memorize. In Guanacaste, couplets are called *bombas*. The following is an example of a Costa Rican couplet:

Costa Rican folklore

*We are going to show it,
With clowns in the streets
How beautiful it's going to be!*

*We will salute the rich,
The poor and the bumpkins,
Some command small change
And others command the bill.*

*They all ask St. Peter
Without fright and without fear
To give them the keys
That open the doors to heaven.*

*And if our turn is good
We are going to dance,
If I succeed in getting her to dance
You my friend are going to smack me.¹⁷*

Activity 2 - Spanish

- Have your students identify songs, dances, couplets, poems, *retahílas*¹⁸ or *bombas* from the region where your school is located.
- Ask the students to read, recite or transcribe a couplet, poem, song, *retahíla* or *bomba* they know.

¹⁷ Couplets are expressions of local folklore. They are simple and easy verses to memorize.

¹⁸ *Retahíla*: A long, funny poem spoken very quickly, and often accompanied by music.

Activity 3 - Social Studies

Invite your students to do research on indigenous groups located in our country. Have them discuss: What are these indigenous groups like? Where do they live? What is their culture like? What language do they speak?

Activity 4 - Social Studies

Ask your students to read the national anthem and reflect on:

What are Costa Ricans like? What customs are there in our culture (food, clothing, language and national symbols)?

Theme 2 - Respecting all Forms of Life

The Relationship between Human Beings and Other Living Beings

Introduction

In any time or place, the basic foundation of ethics is upheld by respect. Respect is one of the most important values for creating peaceful coexistence and ensuring harmony amongst human beings as well as between humans and nature.

The first part of the Earth Charter, entitled “Respect and Care for the Community of Life”, includes the principle “Respect Earth and life in all its diversity”. This calls on us to recognize that all beings are interdependent and that all forms of life have their own value. It is obviously important to respect the right of all people to live with dignity (including future generations). Respect is also included in other principles of the Earth Charter like:

Principle 4: Secure Earth's bounty and beauty for present and future generations. (This means respect future generations).

Principle 12: Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health, and spiritual well-being, with special attention to the rights of indigenous peoples and minorities.

Principle 15: Treat all living beings with respect and consideration.

What does “respecting all forms of life” mean?

It means respect toward species and communities, respect toward biological diversity. Respect toward essential ecological processes, like transforming organic material in the forest into mineral nutrients later absorbed by vegetation.

It means respect toward human life. This has to do with taking less risks with synthetic pesticides to control pests in agriculture and at home, or even better, using alternatives which do not imply the use of

these synthetic products, reforestation, territory planning and management, appropriate land-use and proper handling of solid waste. It also refers to the respect we owe to other humans and animals, and also reflected by our actions.

In sum, it means respect toward the individual, child and adult, woman and man, poor or rich, educated or illiterate, toward the community, ecosystem, and exosphere. As such, it deals with a universal value, it is a human responsibility.¹⁹

Rolando Mendoza

Suggested Activities

Teachers can reinforce this theme by carrying out activities which:

- Help students better understand that each being is worthy of respect, including future generations.
- Sensitize students to the value of all forms of life and the interdependence of all living beings, independent of their usefulness.
- Create opportunities during school time for students to show respect in their daily activities.

Activity 1 - Spanish - Understanding meanings

Have your students:

a) Define respect and disrespect and provide examples of each. This can be carried out through discussion, writing or comprehension exercises using the Earth Charter text highlighted in this theme.

b) Identify two actions which show respect and two that show disrespect toward:

- Plants and animals
- Rivers and lakes
- Friends and family

c) Start a discussion about how we should care for all living beings. Provide examples.

d) Identify actions that can be taken to promote respect and care for others and for all life forms.

Activity 2 - Art

Have your students create a drawing, play or song that expresses this principle. Organize a contest when their work is complete.

Activity 3 - Math

¹⁹ Mendoza, Rolando. *Módulo de educación ambiental para docentes de I y II Ciclos de la Educación General Básica. Módulo No.1.2003* p. 59.

In this subject, you can do exercises related to current issues: the amount of wild animals living in captivity or the number of endangered species that exist today. Another exercise could be comparing the number of animals of a certain species which existed in 1990 with the number that exist today. This exercise will help students understand biodiversity loss from a mathematical perspective, and it will also help them appreciate the need for the principle of respecting all forms of life.

Activity 4 - Science

In order to explain the concept of “habitat”, you can offer examples of wild species in captivity: parrots, iguanas or monkeys. These animals do not live in their natural habitat, therefore students can connect these types of situations with showing respect or disrespect toward these living beings.

When covering biodiversity, share some thoughts with your students about what has caused plant and animal species extinctions and reductions. This trend is largely related to the need for respect and care for all forms of life.

Activity 5 - Social Studies

In order to develop concepts related to the Conquistador period, students can analyze aspects such as the way the Spanish treated the indigenous peoples.

Teachers can create a discussion about discrimination: “Where discrimination exists, there is a lack of respect toward other people”. Such discrimination can be towards race, color, gender, social class or other characteristics.

Activity 6 - English (or any second language)

Students can write the principles in English or another foreign language (versions in other languages can be found on the Earth Charter webpage).

Have your students:

- Define respect and care, and identify new words.
- Give examples of actions that show respect and disrespect.
- Write a short story about this theme.

These illustrations can be used to help explain this theme.

Disrespect



Respect



Theme 3 - Conservation, Protection and Restoration of Social, Cultural and Natural Environment

Biodiversity



Referencing the Earth Charter

Principle 5: Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.

Principle 5b: Establish and safeguard viable nature and biosphere reserves, including wild lands and marine areas, to protect Earth's life support systems, maintain biodiversity, and preserve our natural heritage.

Introduction

Biodiversity, or biological diversity, is the great variety of living organisms which live on this planet, whether found in land, air, marine or aquatic ecosystems. It includes all species of animals, plants, fungi and microorganisms, as well as their ecological relationships.

Around 50% of the world's species are found in the tropics. Costa Rica is

There is nothing which is nothingness; everything has a start and a finish, and everything has a purpose. The relationship between human beings and biodiversity is infinite. Independence is something which does not exist; it is the great myth of our society. There is no independent nation, nor people nor individual. We all depend on each other. Nature comes before all of us, and we are all her children. As such, we are obligated to respect and appropriately utilize her.

*Alejandro Swaby Rodriguez
Costa Rican indigenous leader*

located in this area and has approximately 4% of all species. It is estimated that our country has more than 500,000 species of organisms, of which barely 85,000 (17%) have been classified.

This great biodiversity is due to factors such as geography, climate, relief and geology, which promote an abundant biological richness. Even though there is large variety in altitude (from sea level to 3,800 meters), in this region temperature stays stable throughout the year. This allows for many types of habitats and ecosystems containing an abundance of life forms.

Classifying Biodiversity

- 1. Genetic diversity:** the diversity which exists amongst individuals of the same species. Its measurement is based on genetic variation (hereditary information which can be transferred from one generation to the next). It is important because it allows thousands of specific adaptations within the same species, generating varieties tolerant to various conditions: dryer or more humid, colder or rainier, more acidic or more basic soils.
- 2. Species diversity:** the variability of living organisms that exist on this planet, from unicellular beings to the most complex (superior vertebrates like human beings). Species diversity is the result of adaptation mechanisms to different environments.
- 3. Ecosystem diversity:** this is comprised of the number and relative abundance of habitats, biotic communities and ecological processes on Earth. It is difficult to measure this diversity because ecosystems are constantly changing and do not have precise limits, either geographically or over time, especially marine ecosystems.

The Benefits of Biodiversity

Throughout our evolution, human beings have used and modified biodiversity according to our needs:

- a. Subsistence:** allows human beings to fulfill their food needs or to generate an income to fulfill their basic needs.
- b. Commercial:** when selling or trading resources, a monetary profit can be made. Examples: selling game meat, skins, eggs from wild birds, fruits, turtle eggs and meat, shark fins, etc.
- c. Scientific:** when ecosystems and flora and fauna populations are the object of scientific studies. Research generates information that is of great importance for developing actions to conserve biodiversity and the human race.

- d. **Educational:** when used to explain natural processes or the problems faced by biodiversity (indiscriminate use). Its purpose is to generate action for conservation and to promote respect to all forms of life.
- e. **Recreational:** the benefits gained through outdoor activities and the enjoyment of natural resources: when we visit protected wilderness areas, historical sites, museums, etc.
- f. **Religious:** when certain groups of people have assigned a spiritual meaning to certain wild species, such as the snake and the jaguar.

Other Benefits of Biodiversity

The role of biodiversity in natural ecosystems

- Maintaining climate
- Purifying air and water
- Conserving and maintaining soil fertility
- Supplying essential nutrients for life (carbon, oxygen, nitrogen)
- Maintaining ecosystem functions (evolutionary processes)
- Absorbing and dissolving contaminants (organic, pesticides and heavy metals)

Biodiversity has been very important in developing the pharmaceutical industry, natural products and the natural medicine industry as well as in the development and protection of crops and industrial seeds. It is essential for our health since the majority of medicine is produced with biochemical elements containing plants.

In recent decades, biodiversity has been converted into the primary source of foreign exchange, because its exuberant beauty attracts tourism. In this way, biodiversity is a source for developing the country and communities bordering protected wilderness areas.

Causes of Biodiversity Loss

Our planet's biodiversity is in a crisis: a total of 15,589 species in the world are in danger of extinction. Studies indicate that 12% of bird species are endangered. Some 23% of mammals, 32% of amphibians, 25% of reptiles and 18% of fish species are endangered. The following chart has findings of studies that have been carried out:

Vertebrates	Number of distinct species	Number of studied species	Number of endangered species in 2004
Mammals	5,416	4,853	1,101
Birds	9,917	9,917	1,213
Reptiles	8,163	499	304
Amphibians	5,743	5,743	1,770
Fish	28,500	1,721	800

Source: 2004 IUCN Red List of Threatened Species <http://www.redlist.org>

The impact human activity has had on the environment (contamination, deforestation, indiscriminant hunting, habitat fragmentation, etc.) has accelerated the destruction of ecosystems and the disappearance of species, resulting in biodiversity loss.

In light of the above, it is urgent to establish methods for protection, conservation and the sustainable use of biological diversity. For this, protected wilderness areas have been created. Their main purpose is to give continuity to natural ecological processes and to conserve the genetic material of species, primarily those which are endemic or in danger of extinction. Another function is protecting indigenous territories, which saves our culture's traditional knowledge and practices.

Suggested Activities

Activity 1 - Spanish

Have your students read the poem by the indigenous leader Alejandro Swaby Rodriguez.

Ask each student to choose and analyze their favorite sentence from the poem and to tell the group about it.

Ask them to write a short story about "how to respect and conserve biodiversity in your community".

Activity 2- Science and Art

Have your students do some research on the biodiversity in our country: how many species of mammals, birds, reptiles, amphibians and fish we have, and which ones are endangered. Then, have them comment on the condition of our biodiversity.



Coral Reef



Tropical Rainforest



Páramo



Cloud Forest



Mangroves



Tropical Dry Forest

Divide the class into six groups and assign each one a different type of ecosystem:

1. Tropical dry forest
2. Cloud forest
3. Tropical rainforest
4. Mangroves

5. Páramo²⁰
6. Coral reef

Have each group do some research on their assigned ecosystem: its characteristics, its organisms and their relationships.

After the research is complete, have them share their findings through a drawing or a model to be presented later to the other groups.

Activity 3 - Mathematics

The teacher should develop calculations using the number of flora and fauna species.

Activity 4 - Social Studies

Invite the group to think about and comment on the “relationship each person has with his or her environment, throughout a typical day, taking plants, animals, air, water and other elements into consideration”. Ask them to share their responses and make a group each time an element applies to them.

Evaluation Activity

After developing this theme, ask your students:

- What did you like the most about this topic?
- What did you not like about it?
- New concepts.
- The most interesting thing they learned about biodiversity.
- Finally, draw some conclusions or close the activity by reinforcing those ideas you consider most important for your students’ learning.

Protected Wilderness Areas

*Let me be a giant on my Earth,
To travel our rivers one by one
And clean them up,
And to plant as many seeds
As there are stars in the sky,
And at the end of my days
To rest with open arms
On our mother’s breast.*

Unpublished

²⁰ Páramo: an ecosystem specific to neotropical highlands. In Costa Rica, the highlands of the Talamanca Range are characterized by this type of ecosystem.

Referencing the Earth Charter

Principle 5b: Establish and safeguard viable nature and biosphere reserves, including wild lands and marine areas, to protect Earth's life support systems, maintain biodiversity, and preserve our natural heritage.

Principle 5c: Promote the recovery of endangered species and ecosystems.

Introduction

Protected wilderness areas conserve the majority of Costa Rica's existing habitat. They were created to:

- Provide a refuge for plants and animals in danger of extinction
- Protect historic and archaeological sites
- Offer visitors the opportunity to appreciate and participate in conserving natural and cultural resources
- Generate economic funds to neighboring communities and to the country from national and foreign tourists that visit them

Our country has 132 protected wilderness areas covering 25% of the national territory. Depending on their type of management, they are classified as: national parks, biological reserves, wildlife refuges, protected areas, forest reserves, wetlands and national monuments. These conservation efforts have led Costa Rica to be placed amongst the top twenty countries on the planet with the greatest biodiversity (5% of the world's biodiversity).

Classifying Protected Wilderness Areas

The Ministry of Environment and Energy has defined the following management categories according to the area's activities and objectives:

National Park: area with ecosystems of national or international importance. There is little human activity and great attraction for tourism, recreation and educational activities.

Biological Reserve: areas with ecosystems and flora and fauna species which are at risk. There is minimal human activity.

Forest Reserve: areas with forestry applications for producing wood, where management activities are practiced.

Wetlands: aquatic ecosystems: natural or manmade; permanent or temporary; freshwater, brackish or saltwater.

Wildlife Reserve: an area which, due to its geography, particular ecosystems and exclusive biodiversity, requires management for its protection.

Protected Area: areas made of forests and forestry areas, whose primary objective is soil and watershed protection, as well as environmental conservation.

National Monument: area where a noteworthy historic or archeological cultural resource is located that is of national or international importance.

What are conservation areas?

Conservation areas are areas made up of various types of management, allowing for conservation, protection, and resource use, as well as improvements in environmental quality. In our country, the Ministry of Environment and Energy (MINAЕ)'s National System of Conservation Areas (SINAC) is in charge of eleven protected areas:

1. Arenal Tilaran
2. Arenal Huetar North
3. Guanacaste
4. Tempisque
5. Central Pacific
6. Central Volcanic Range
7. Osa
8. Pacific Amistad
9. Caribbean Amistad
10. Tortuguero
11. Cocos Island

These areas host 500,000 species of fauna and flora, of which 300,000 are insects. The Conservation Areas protect the following endangered species: 83 bird species, 14 mammals, 81 amphibians, 28 reptiles, 18 timber species, as well as 1,300 plant species. These also protect two biosphere reserves, three world heritage sites, and ten wetland areas of international importance.

Benefits of having protected areas

Protected areas provide watershed protection so there is sufficient water to develop agricultural, industrial and domestic activities, as well as produce hydroelectricity. They are outdoor classrooms for learning about natural processes, appreciating nature, and participating in environmental conservation activities.

National and foreign specialists and students carry out scientific research in protected areas. However, the primary function of protected areas is to offer recreation for the thousands of national and foreign visitors that come each year, attracted by the great biodiversity these areas harbor.

You can contribute to wilderness area conservation

- Use videos about national parks to illustrate and expound upon various ecosystems and their interrelationships. UNED (university) has produced a series of films that you can use for educational support.
- Celebrate the important dates dedicated to environmental conservation (see table below).
- Organize student and community groups to promote and carry out activities which protect the environment.
- Find out about volunteer programs in wilderness areas near you, and collaborate with these programs to support conservation activities.

Important dates to celebrate

February 2	World Wetlands Day
March 21	World Forestry Day and International Day for the Elimination of Racial Discrimination
March 22	World Water Day
March 23	World Meteorological Day
April 18	International Migratory Bird Day
April 22	Earth Day and World Health Day
May 1	International Workers’ Day
May 3	National Soil Conservation Day
May 22	International Day for Biological Diversity
June 5	World Environment Day
June 8	National Whitetail Deer Day
June 15	Tree Day
July 11	World Population Day
Fourth Monday in July	National Wildlife Day
August 9	International Day for the World’s Indigenous People
August 24	National Park Day
September 5	International Day of Peace
September 16	World Ozone Day
September 30	World Maritime Day
October 4	Inter-American Water Day and National Potable Water Day
October 6	World Habitat Day
October 24	United Nations Day
November 16	International Day for Tolerance
December 4	International Volunteer Day

Suggested Activities

Activity 1 - Social Studies

- Have your group use the map to identify the conservation area closest to your community
- Organize working groups and have students research the following:
 1. Which types of protected areas can be found in this conservation area?
 2. What types of ecosystems does it have?
 3. What natural and cultural resources does it protect?
 4. Which activities in this area are carried out for environmental protection and improvement?
 5. Which institutions and organizations carry out these activities?
 6. Which activities can be carried out, by both students and teachers, to contribute to protecting the protected wilderness areas nearby your community?

Activity 2 - Science and Mathematics

- Ask each student to choose the protected area they are most interested in from Activity 1.
- Have them research how many plant and animal species are protected in this area.
- Ask them to find out how many of these species are endangered.
- To finish up the activity, have them comment on how they can help avoid these species from going extinct.

Activity 3 - Spanish and Art

- Have each student write a short story about the importance of the protected area (chosen in Activity 2) to their community.
- Finally, ask them to illustrate this with a drawing.

Evaluation Activity

After finishing this theme, ask your students:

- What they learned about this theme.
- What they liked the most about this theme.
- What they did not like about this theme.
- The actions they can take with their parents to contribute to the conservation of protected wilderness areas nearby their community.

Finally, draw some conclusions or close the activity by reinforcing those ideas you consider most important for your students' learning.

Biological Corridors

C - like streets

O - or avenues that

R - plants and animals travel on

- R - routes with different
- E - ecosystems and habitats
- D - where they find food, are protected
- O - or can reproduce in order to
- R²¹- protect their species and biodiversity

Lidia M. Hernandez R.

Introduction

Biological corridors are extensions of territory that link ecosystems and habitats together, whether natural or manmade. They make the migration and distribution of wild flora and fauna species possible. Their purpose is to ensure biodiversity conservation.

The Importance of Biological Corridors

Biological corridors help maintain the flow of genetic material between isolated populations of the same species. In the face of global warming, they offer species the opportunity to migrate toward zones that support their ecological necessities, as these species face warmer conditions.

Considering biological corridors with farms and private areas, their significance may include even more: for-profit forest and plantation management, forestry-pastoral systems, living fences, trees in cattle ranches, and organic agriculture.

Biological corridors can contribute to food security, alternative product diversity and cultural identity. Therefore, they also minimize the social impact generated from the alteration of ecosystems.

Biological Corridors in Costa Rica

In order to conserve our biological diversity, 32 biological corridors have been established: *Osa, Paso de la Danta, Talamanca-Caribbean, de Cordillera a Cordillera, San Juan-La Selva, Jahancha-Nandayure, Peninsular, Cerris de Jesus, La Cruz-Fronterizo, Braulio Carrillo-La Selva, La Mula, Barbudal, Bolson-Ortega, Diria, Morocochas, Tortuguero, Corcovado-Piedras Blancas, Cusingos-Las Nubes, Miravalles-Tenorio, Monteverde-Golfo de Nicoya, Rincon Cacao, Tenorio-Arenal, Venado, Costero Parismina, Brenes-Cabo Blanco, Boruca-Cabanga, Changuena-Puentes de Vida Canasta, Guaymi-Fila Cal, Para Aves, Parte Alta la Pantera, Rincon Miravalles, Rincon Rainforest and Tapanti -Cerro Chonta.*

One way of consolidating these 32 corridors is to establish alliances between MINAE and local community organizations which promote:

Objectives of the Mesoamerican Biological Corridor

- To protect key ecosystems with important biodiversity.
- To connect areas through corridors which allow for movement and distribution of plants and animals.
- To promote sustainable development activities in communities which contribute to improving the quality of life of the population and to conserving the natural and cultural biodiversity.

²¹ Corredor is Spanish for corridor.

- Environmentally-friendly agriculture and livestock activities.
- Developing sustainable tourism.
- Payment for environmental services programs.
- Implementing ecological restoration projects.
- Protecting aquifer recharge areas.

The Mesoamerican Corridor

As a regional effort to conserve wilderness areas extending from the southern part of Mexico through Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica and Panama, the creation of the Mesoamerican Biological Corridor is being promoted.

In Costa Rica, the National System of Conservation Areas (SINAC) is the office responsible for coordinating this effort at the national and regional levels.

Suggested Activities

Activity 1 - Spanish

- Form working groups and have students analyze the poem of Lidia M. Hernandez R.
- Ask the groups to share their reflections and comments.

Activity 2 - Science

Ask your students to work in groups and look for different examples of how the following are related:

1. Plants to other plants
2. Plants to animals
3. Animals to other animals
4. Human beings to each other
5. Human beings to plants and animals

After each group shares their examples, ask the students to draw a final conclusion from the activity.

Evaluation Activity

After developing this theme, ask your students:

- What they liked the most about this theme.
- What they did not like about this theme.
- What they learned about this theme.

Finally, draw some conclusions or close the activity by reinforcing those concepts you consider most important for your students' learning.

Theme 4 - Preventing and Mitigating the Impacts of Human Activity

Energy Conservation

"In the end, we conserve only what we love; we love only what we understand; and we understand only what we are taught."

Baba Dioum

Referencing the Earth Charter

Principle 7b: Act with restraint and efficiency when using energy, and rely increasingly on renewable energy sources such as solar and wind.

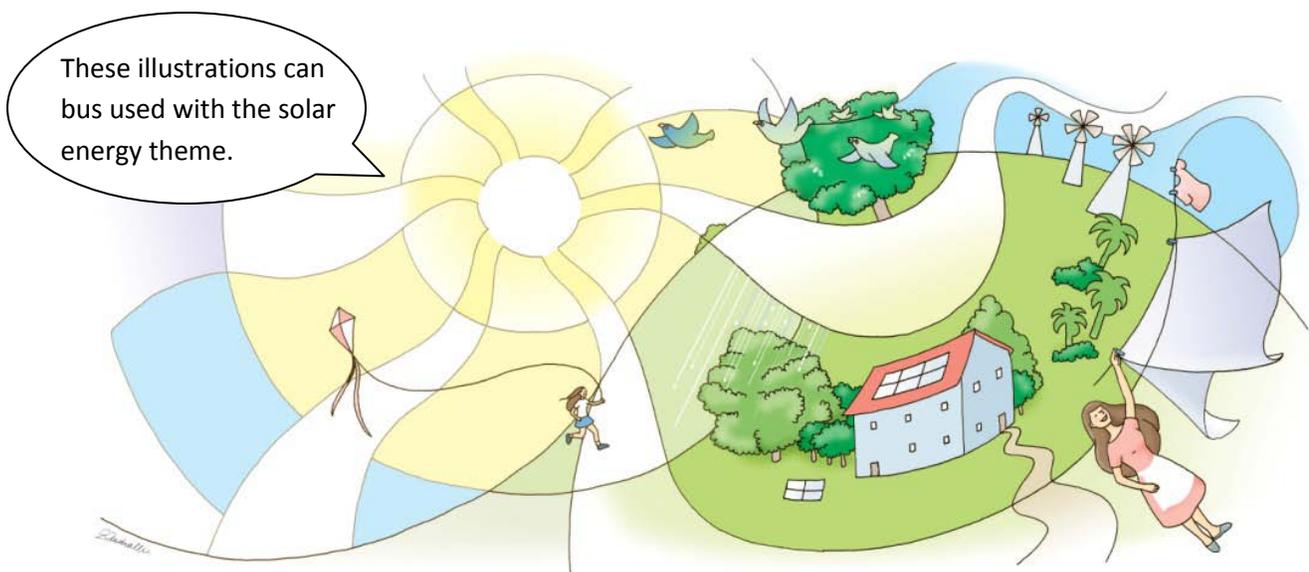
Principle 5f: Manage the extraction and use of non-renewable resources such as minerals and fossil fuels in ways that minimize depletion and cause no serious environmental damage.

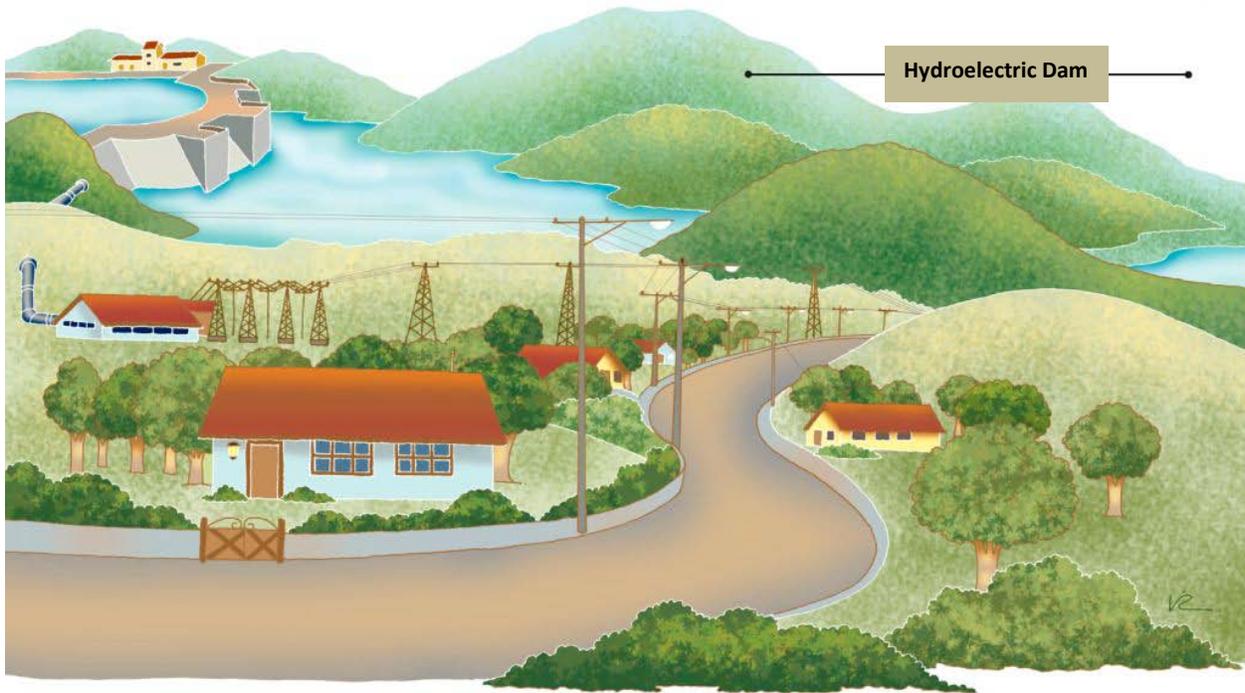
Introduction

The primary type of energy used to maintain life on Earth is solar energy. Living beings use solar energy to carry out their functions. This can be seen from the lowest levels of the food chain, as plants use sunlight for photosynthesis, the foundation for oxygen production on our planet.

When the sun's energy reaches the Earth, a large portion of it (70%) returns to space. Of the remaining 30%, a large portion is turned into rain and wind, or into chemical components below Earth's surface such as natural gas, carbon and petroleum. Some of the energy is used by plants and animals (including human beings) for their various functions and activities.

Society today depends more and more on energy that causes severe, and often irreversible, damage to natural resources.





Types of Energy

The various types of energy include: solar, wind, geothermal, hydroelectric, nuclear, and biofuels, amongst others. Unfortunately, our excessive use some types of energy is destroying our planet at an alarming rate.

- **Hydroelectricity**

Hydroelectricity is the most common type of energy used by human beings, particularly in developing countries. This energy is produced with water from rivers and other sources (like lakes and springs).

To capture the energy necessary to produce hydroelectricity, a series of structures must be built, like dams, towers, transmission lines, domestic installations, public networks and tunnels. This construction increases deforestation and displaces people.

When rivers were first starting to be used to generate electricity in Costa Rica, it was thought that there would be no problems since we have so many rivers. This way of thinking led to the evermore prevalent consumption habits which waste energy today.

- **Solar Energy**

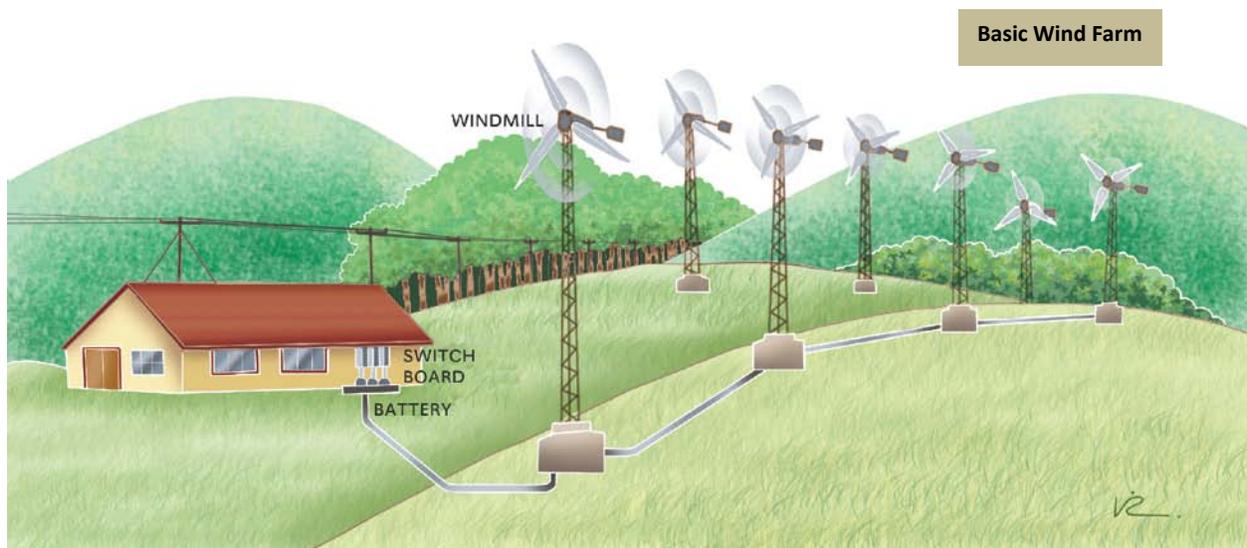
The sun's rays can be captured by a series of silicon plates, known as solar panels; when the sunlight lands on these plates, electrons in the silicon are displaced, producing electricity.

This energy can be used directly for kitchens, dryers, ovens, water purifiers, televisions, refrigerators, lightbulbs and other appliances.

- **Wind Energy**

In order to produce electricity from the wind, we construct wind farms. Wind farms are composed of windmills, with blades that are rotated by the wind. This movement causes a generator to rotate and produces electricity.

The amount of electricity produced depends on the speed and frequency of the wind, as well as the size of the windmill. Wind energy, like solar energy, is a new technology that has a minimal impact on the environment.



Some Actions for Using Energy Wisely

In order to conserve our natural resources and benefit the planet, we must modify our lifestyles and save energy. This also results in financial savings, improving our household economic situations.

Some useful advice on how to save energy:

1. Turn off the lights when leaving the room.
2. Use 50, 60, and 70 watt lightbulbs, because they consume less energy.
3. When possible, use fluorescent lighting, because this consumes less energy and lasts eight times longer than incandescent lightbulbs.
4. Iron all your clothes at one time, so that you do not turn the iron frequently on and off.
5. Turn off the radio, sound system, and television when you are not using them.

6. Do not frequently open the refrigerator, because this wastes a lot of energy and the food does not stay fresh as long.
7. Turn off the hot water showerhead when soaping up. This saves electricity and also potable water.
8. Review the condition of your electric wiring. If any of is “exposed”, this will increase energy consumption and also create a great risk of fire.

Appliances like irons, hair dryers and the electric range are high-energy appliances, because they function through “resistances” and require a certain amount of time to heat up. Each time they are turned off, they need to be heated up again, thus wasting energy.

Suggested Activities

In order to develop this theme in the classroom, it is suggested that the teacher have students carry out the following activities:

Activity 1 - Spanish

- Write down the students’ daily activities that use energy.
- Identify which of these activities can be modified to save energy.

Activity 2 - Mathematics

Ask your students to keep track of the amount of electricity (in *colones*²² and kilowatts) used by their family over one month, verifying their results with their electric bill. Then in the classroom, ask the students to compare and analyze their results.

Activity 3 - Science

To study the theme “Energy sources in our country”, have your students do some research on the types of energy that cause the least amount of environmental damage.

Activity 4 - Social Studies

Using a map of Costa Rica, ask your students to locate the geographical areas with alternative energy sources (wind, geothermal or solar). Have them mark these for later use in science.

Water Resource Conservation

“Water is an indispensable natural resource for all forms of life on the planet, and the health of every ecosystem depends on it.”

Francisco Jimenez



²² Costa Rican currency

Referencing the Earth Charter

Preamble: The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clean air.

Principle 5: Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.

Principle 9a: Guarantee the right to potable water, clean air, food security, uncontaminated soil, shelter, and safe sanitation, allocating the national and international resources required.

Introduction

Water is essential for the subsistence of all forms of life. Seventy percent of our planet's surface is covered by water, and 97.2% of this is saltwater found in the oceans and seas. Another significant percentage (2%) is the ice of the polar icecaps. This means that the amount of water available for human consumption is relatively small. Of the total amount of water consumed by human beings, 70% is used in agriculture, and 22% is used for energy production. Only 8% is used by the millions of people living on this planet for consumption and hygiene.

In our country, 82% of water is used to produce electricity, 8.3% for agriculture and livestock, 6.3% for industry, and 3.4% for domestic use (*State of the Nation*).

Costa Rica has an abundance of water resources, primarily due to its climate and to its edaphic and orographic characteristics.²³ The average annual rainfall is 3,300 cubic millimeters, equivalent to 170 cubic km per year from the slopes of the Caribbean to the Pacific.

Benefits of Water Resources

Our water resources are being destroyed and becoming more hazardous each day. Fifty years ago, Costa Rica had an abundance of very high quality sources of water. Currently this valuable resource is becoming increasingly scarce, and its sources are severely contaminated. The inhabitants of this beautiful country have not properly valued this vital liquid. Today, we can sadly say that "our water resources are no longer one of our riches".

- They supply water for human consumption.
- They supply water for productive activities.
- They provide nutrients, minerals and medicinal resources.
- They provide habitat for numerous species.
- They produce hydroelectricity.
- They provide transportation routes.
- They are socio-culturally important.
- They are a basis for research and education.
- They motivate recreation and tourism.

²³ Characteristics of soil and relief.

Water Resource Problems

- Deforestation causes soil erosion and decreases the flow of rivers.
- Disproportionate population growth and urbanization results in greater water consumption and contamination. Furthermore, the construction of bridges, highways, etc. decreases soil absorption.
- The improper handling of wastewater and black water, as well as fertilizers, industry and agricultural and livestock waste, produces water contamination.
- The extraction of river materials, like sand and rocks, deteriorates river beds and banks.



Actions for Saving Water

It is necessary to have a responsible attitude at the personal, family and community levels toward the use of water resources. This requires:

- Respecting, conserving and restoring watersheds, rivers, lakes and the sources of water.
- Creating action groups with members of the School Board to coordinate with the Municipality to watch over the status of water sources as well as the equitable and responsible use of water.
- Sensitizing students to these issues and instilling a responsible attitude in them through environmental education.
- Developing community activities, involving diverse sectors of society, to promote a change in attitude for the appropriate use of water and the consequential protection of its sources.

Suggested Activities

Activity 1 - Social Studies

Have your students:

- Use a hydrology map of Costa Rica to locate three of the closest rivers to your community. Write down the correct name of each of these and which watershed they belong to.
- Research the location of the sources of water for your community. When possible, organize a visit to learn about this site in its entirety (forest cover, nearby dairies, crops, sanitation, and other aspects that interest the students).

- For Natural Resources Week, invite your students to carry out a campaign for the entire school community and, with their parents, to develop an action plan for protecting water sources through reforestation, living fences, river clean ups, etc.

Activity 2 - Spanish and Art

- Create working groups (ecological committees) so that during the month of October, the month which we have dedicated to water, your students can make murals each week using cutouts from magazines and newspapers related to the theme of water.
- Invite your students to write a short story about the protection and conservation of water resources. Some of the main ideas could include:
 - Diminishing drinking water supplies
 - The relationship between water and other natural resources
 - Human activity that damages bodies of water
 - Actions we can take to save our remaining water sources
 - Changing our attitudes toward the way we live and the importance of water

Later you can select some of these short stories and create a small play to perform for the parents and community.

Activity 3 - Science

Form small groups and discuss the functions of living beings, distinguishing those that require water. Also, have them describe activities where children use water and how they could use it more wisely.

Activity 4 - Mathematics

- Invite the students to make a preliminary calculation of the amount of liters of water consumed by the school each week or month or given period. From this, you can draw out relationships, percentages and other interesting data.
- Have your students research the following at home:
How many liters of water are used in each of the following activities?
 - Brushing teeth
 - Showering
 - Washing vegetables
 - Watering plants
 - Flushing the toilet
 - Washing the car

You should make suggestions to your students about how to carry out these calculations efficiently. Later in the classroom, make a comparative table to determine which activity consumes the most water. From this, you will be able to come up with a list of actions that save water.

This activity can be repeated a month later to evaluate any significant changes that have occurred in the students' behaviors.

Evaluation Activity

Once this theme has been fully presented, ask your students:

- Which rivers you have learned about?
- What is the water from these rivers used for?
- At home, what actions can you take to save water?
- Who will you share what you have learned with (family, friends, neighbors)?

Close this theme by emphasizing, together with your students, the importance of putting into practice all the actions they have proposed.

Proper Handling of Solid Waste

*“It is our responsibility to preserve our natural resources,
just as it is our commitment to improve life on our Mother Earth.”*

Elizabeth Ramirez

Referencing the Earth Charter

Principle 7: Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being.

Principle 7a: Reduce, reuse, and recycle the materials used in production and consumption systems, and ensure that residual waste can be assimilated by ecological systems.

Introduction

The millions of people living on Earth have created one of the Earth's most serious problems: TRASH. Acquiring unnecessary things, buying items with excessive packaging or of very poor quality, and many other activities produce tons of trash each day, and this is causing irreversible damage to our world.

The trash we produce as human beings contains various materials; some are biodegradable (plants and animals), and others are not biodegradable, such as the plastics, glass, cans and styrofoam. These materials make up solid waste. People want to throw these substances and materials away. However, around the world, neither communities nor governments have found a true solution.

Time required for the decomposition of various solid waste



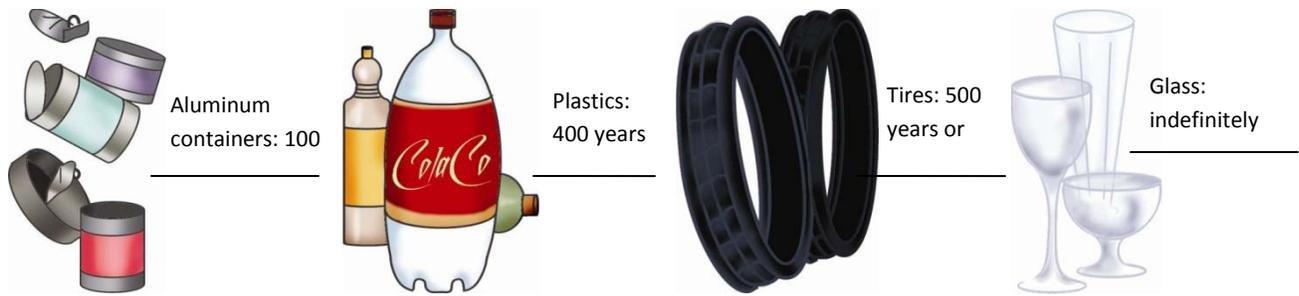
Fruit peels:
2-3 weeks



Twine: 3-14
months



Cellophane:
1-2 years



Costa Rica has been concerned with trash management since 1926. However, even today at the beginnings of the 21st century, trash is a problem that has not yet been resolved. This is why it is important to integrate this theme into the education process and encourage changes in attitude, which will contribute to finding viable solutions. This process needs to begin at home, to continue at school and to reach out to the community.

Problems around Solid Waste

The problems around solid waste include two aspects: the large amount of waste we produce and our poor handling of waste. This is serious, because:

- a. The amount of trash we produce is increasing each day, because people are acquiring more, often unnecessary, items and equipment.
- b. We continue to place our trash in the ground, which causes the release of gaseous vapors with damaging consequences.
- c. People continue dirtying public and private areas with trash that could be recycled or reused.

How can we overcome these problems?

The solution to this problem begins with becoming conscious of the 4 R's and incorporating them into our daily activities: Refuse-Reduce-Reuse-Recycle.



Refuse

This means not accepting products, because of the



Recycle

When solid waste is sorted, its value increases.

material they are made of, their packaging, or the contamination they create when thrown away (like batteries, disposable dishware or plastic packaging).



Reduce

Only buy things which we absolutely need. We should also reduce the amount of energy and water we use.

Therefore, if we separate our trash and send it to a collection center, it can then be sold to businesses that recycle cans, plastic, paper and glass.



Reuse

Use packaging which is returnable or reusable. Donate clothes, games and kitchenware you no longer use, as well as books and magazines.

Recycling reduces environmental destruction and improves our health. Furthermore, it decreases the need for new land for dumps and sanitary landfills. It economizes energy by reusing items whose production would imply a high energy cost; finally, it eliminates the air and water contamination that would be generated if this item were newly produced.

Suggested Activities

In order to reinforce this theme, the teacher can carry out activities which promote:

- Recycling and reusing
- Not purchasing items, because of how they were produced or contribute to climate change, such as aerosols, varnish and solvents.
- Decreasing consumption of disposable packaging and styrofoam
- Coordinating the collection and payment of recyclables with some nearby collection centers.

Activity 1 - Science

With your students, analyze the decomposition times of organic and inorganic solid waste, with the purpose of having the children understand the impact these items have on the environment.

Ask them to identify the items in your classroom trashcan and classify them according to their origin (organic or inorganic). When handling solid waste, use gloves or plastic bags to protect your hands.

Activity 2 - Spanish and Art

Ask your students to write a poem or short story, and to create drawings or plays, depicting an activity related to one of the 4 R's.

Invite your students to develop projects that promote separating trash. Have them decorate the different trash receptacles, and weekly they can create new signs to put in strategic places of the school to motivate the entire student body to participate.

Activity 3 - Mathematics

Have your students do preliminary calculations on the quantity (kilograms or units) of solid waste produced by the school each month or each week.

Organic Agriculture

*Our Mother Earth has always offered us a place to live
so that, from her, we will be able to grow in mind, body and spirit."*

Benjamin Jacanamijoy

Referencing the Earth Charter

Principle 5a: Adopt at all levels sustainable development plans and regulations that make environmental conservation and rehabilitation integral to all development initiatives.

Principle 5e: Manage the use of renewable resources such as water, soil, forest products, and marine life in ways that do not exceed rates of regeneration and that protect the health of ecosystems.

Principle 8b: Recognize and preserve the traditional knowledge and spiritual wisdom in all cultures that contribute to environmental protection and human well-being.

Introduction

Organic agriculture is a cultivation system that seeks to maintain plant health by naturally nourishing the plants and not using contaminants or other chemical substances (herbicides, synthetic fertilizers, etc). At the same time, it promotes conservation and the appropriate use of soil, water and energy. Using our natural resources in this way ensures an efficient and harmless economic model. However, to achieve these goals, perseverance, patience and a commitment to producing highly nutritious food is needed. In this way, a healthier world can be created despite the competition that exists in our current economic system.

Benefits of Organic Agriculture

- Applying organic compost replenishes soil fertility. For this reason, healthy food is produced.
- It uses practices and technology that benefit human and environmental health, as no agrochemicals are used.
- Earth is accurately valued, protected and sustainably used.
- Consuming healthy products improves our health as well as our environment and our families' quality of life.

- It encourages family and community participation, which encourages solidarity in rural areas.

Techniques Used in Organic Agriculture

To practice organic agriculture, use the following techniques:

1. **Diversify:** in the same area, plant a variety of crops.
2. **Crop rotation:** to avoid pests and disease, alternate your crops; do not plant the same crop in the same plot year to year.
3. **Crop association:** certain plant species grow well together, whether through stimulating growth or enhancing their defense mechanisms. One example of this is the planting garlic or tomatoes nearby cabbage to avoid it from being infested with moth larva.
4. **Use organic material:** this helps replenish soil fertility. Furthermore, fungi, bacteria and enzymes decompose organic material, and worms improve aeration, drainage and nutrient transport, improving the soil's productivity.
5. **Proper seed use:** using healthy seeds of good size and adapted to the region guarantees a better harvest as well as a higher resistance to diseases.
6. **Natural barriers (living fences):** these are trees or bushes which border various properties. These barriers are important because they obstruct the passage of diseases and mitigate soil erosion. Furthermore, they attract many wild animals.
7. **Compost:** this is a type of fertilizer with high nutritional content. It is obtained by mixing together your household organic leftovers, manure (from birds, cows, horses, pigs, etc.), grass, sugar cane bagasse, rice husks, ash and lime (calcium carbonate). Cover this mixture with fertile soil and spread it under a tree. Cover this with plastic to keep it moist (it needs to be mixed up every three weeks until the mixture becomes very dark and is of a loose granular consistency).

Suggested Activities

It is important for students to be familiar with the important crops in their community and how agricultural pests and diseases are managed. One of the most important aspects of this activity is for students to research the various agricultural practices that were used 20-30 years ago by talking to older adults and comparing them to current practices.

Science, social studies, mathematics and agriculture can also be integrated into this study. A table can be drafted, as in the following example:

	Crop 1	Crop 2	Crop 3
Type of Crop			
Size of plot (area)			
Number of plants per sq. meter			
Pests encountered			

Using the previously described organic agricultural practices as a basis, students can choose the most viable option for developing an organic agriculture project in your school.



Climate Change

"There is only one atmosphere: it has no boundaries. We do not want toxic gases floating everywhere. Let's do something about it. All of us together."

A child from India

Referencing the Earth Charter

Preamble: ...This requires a change of mind and heart. It requires a new sense of global interdependence and universal responsibility...

...We are at once citizens of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world...

Principle 6a: Take action to avoid the possibility of serious or irreversible environmental harm even when scientific knowledge is incomplete or inconclusive.

Principle 6c: Ensure that decision making addresses the cumulative, long-term, indirect, long distance, and global consequences of human activities.

Introduction



Global climate change is caused by the processes and interactions between the atmosphere and life on Earth as well as by the variations in solar radiation that our planet receives. The atmosphere is the most fundamental component of our climate. However, because of its small mass and high instability, our atmosphere is very vulnerable to disturbances.

The addition of small amounts of gases or particulates can significantly vary the interworkings of our atmosphere. It is almost exclusively composed of gases, and the mixing process happens very quickly. This light and vulnerable layer of gas plays an important role in the equilibrium of Earth's energy, because it controls the amount of radiation from the sun that can reach the Earth as well as return to space. Its existence makes life on Earth possible. Ozone is amongst the various gases found in the atmosphere. The part of the atmosphere where large quantities of this gas are found is known as the ozone layer. This layer acts as a shield (solar filter), so that lethal radiation cannot reach Earth's surface.

Chlorofluorocarbons, or CFCs, used in refrigerants, aerosols, synthetic foam components, detergents and other contaminating products, are responsible for the depletion of the ozone layer. This depletion has caused an increase in diseases like cancer.

Atmospheric gases retain heat, which allows our planet to regulate its temperature. However, when there is an excessive increase in atmospheric gas concentration, from air pollution and our daily activities, the greenhouse effect is created.

The scientific community has predicted a significant change in our climate as a result of this increase in gas concentration, which we have already begun to experience. Fifty percent of these gases are carbon dioxide and come from the combustion of fossil fuels (carbon, natural gas and petroleum) and deforestation.

Other gases responsible for climate change:

- Methane from swampy areas, animal excrement and solid waste
- Nitrous oxide from fossil fuel combustion and chemical fertilizers

Small changes in our atmosphere will alter the average temperature by 2-3 degrees Celsius. This will cause rapid and significant changes that will impact the climate, the Earth and our life systems. If the trend of global warming continues, dramatic impacts are predicted, such as:

- a. Deserts will become hotter, and water scarcity will increase.
- b. Agricultural land will suffer desertification.
- c. It is estimated that between 1/3 and 1/2 of all glaciers, and a significant portion of the polar icecaps, will melt. Consequently, sea level will increase between 10 cm and 1.5 m, causing flooding in coastal areas, islands and cities. Furthermore, there will be beach erosion and saltwater intrusion of estuaries, marshes and coastal swamps and aquifers.
- d. Plants will suffer severe composition and distribution changes.
- e. Infectious diseases like cholera, malaria, dengue fever and yellow fever will increase.

Our planet is experiencing a series of phenomena believed to be caused by global warming, such as:

- Over the past 140 years, deforestation and fossil fuel combustion have increased CO₂ levels by nearly 100 ppm. Also the planet's temperature has increased.
- Since 1979, the permanent Arctic icecap has decreased by 9%.
- Over the past three decades, the temperature in Alaska has increased by 1.25 degrees Celsius, and glaciers are disappearing. It is estimated that 35 sq. km of water per year is lost. In addition, the permafrost²⁴, which is the foundation for roads, buildings and infrastructure, is melting. Furthermore, 1.5 million hectares of fir trees have died from the bark beetle, whose populations have soared due to the warming of the Earth.
- Since 1950, the population of certain penguin species has drastically decreased.

²⁴ The ice layer in the ground which upholds the foundation of infrastructure, such as buildings, houses, roads, etc. Families in Alaska build cellars in the permafrost to store food.

- The warming of the oceans has caused coral reefs to die or lose their color due to the disappearance of the algae that lives with coral.

What actions should we take in the face of global climate change?

To overcome the issues of global climate change, everyone must participate. This includes every individual and nation of our planet, and particularly those regions responsible for high levels of gas emissions (like Europe, North America and Asia).

To avoid these problems we can do the following:

The next time you need to go somewhere, think about walking or riding your bike.

- Avoid burning vegetation
- Decrease petroleum use
- Use clean technology and renewable energy
- Avoid deforestation
- Use our cars less, because they produce contaminant gases which increase the greenhouse effect, acid rain and smog. Therefore, the less we use our cars, the healthier our planet will be.

Suggested Activities

Activity 1 - Spanish

School is an excellent place to initiate activities that will raise awareness around this issue. You can create activities for your students such as: writing letters about climate change to our country's and world's leaders and writing an article for the school newspaper, amongst others.

Activity 2 - Science

Invite the group to create a reforestation project in the school. Make a list of products containing CFC's so that the students can speak to their parents about the importance of not purchasing these products.

Have your students research the meaning of "the greenhouse effect" and "the ozone hole". Have them determine their causes and effects and create a list of actions they can take to resolve them.

Climate Change has social and economic impacts.

Global warming has grave consequences in the social and economic fields. The damage to housing and infrastructure, as well as agricultural losses, implies great (economic) costs. In the social field, there will be increases in cancer as well as lung and infectious diseases. In addition, flooding will cause towns and cities to disappear and the consequential displacement of populations (over 100 million people live within one meter above sea level).

Glossary

Chlorofluorocarbons or CFCs: Chlorofluorocarbons, known as CFCs, are compounds that contain carbon, chlorine, bromine, fluorine, and sometimes hydrogen. CFCs began being produced in the 1930s for refrigeration. Afterward, they were used as propellants in spray cans and as components of synthetic foams and detergents, amongst other uses.

Community of life: A synonym for all forms of life.

Conservation: Care and maintenance of all living species in a natural area, in a way that causes no damage or alteration.

Couplet: A type of poetic folklore. It typically consists of one stanza with four verses. It is popular poetry that is simple, expressive and easily memorized. Its origins come from Spanish songs and refrains, but the couplet was modified in the Americas, where new creations and reinterpretations were made. In *Guanacaste*, couplets are called *bombas*.

Watershed: A region with the capacity to collect rainwater, which is then directed back toward the river.

Ecosystem: A set of living beings and environmental conditions (climate, soil, topography, water, etc) that exist in a specific location and that are interrelated.

Endemic species: An animal or plant species local to a particular region.

Species: A set of similar individual beings that is capable of reproducing with each other.

Extinction: The total disappearance of a species due to natural disasters or human activity.

Fauna: A collection of all the animal species in a country or region.

Flora: A collection of all the plant species in a country or region.

Habitat: Physical medium or environment, in which a living being or a community exists and develops.

Holistic: Adjective describing a general analysis of the sciences or humanities, which takes into account the greatest number of possible interactions of issues, as opposed to taking a reductionist approach.

Identity: A set of symbolic and communal elements that produces feelings of cohesion in a human group, shaped by social relations and interactions.

Management: Use and maximization of natural resources in a manner that guarantees their protection and restoration.

Multiethnic: The coexistence of distinct ethnic groups. These ethnic groups define themselves as closed groups, believing they have common ancestors and are from the same lineage.

Cultural heritage: Goods that are an expression or testimony to human creation or natural evolution, and which have a particular relevance to archaeology, history, literature, education, art, science and culture in general.

Respect: Showing consideration towards others. Accepting others and their ways of thinking, even though they may not be the same as ours; understanding personal and cultural differences.

Resource: Any natural element whose direct or indirect use benefits humanity, such as air, soil, minerals, animals and vegetation.

Wilderness: That which grows naturally in the forest, jungle or countryside, without being cultivated.

ANNEX I

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ANNEX II - Text of the Earth Charter

The Earth Charter - Complete Text

Preamble

We stand at a critical moment in Earth's history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations.

Earth, Our Home

Humanity is part of a vast evolving universe. Earth, our home, is alive with a unique community of life. The forces of nature make existence a demanding and uncertain adventure, but Earth has provided the conditions essential to life's evolution. The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clean air. The global environment with its finite resources is a common concern of all peoples. The protection of Earth's vitality, diversity, and beauty is a sacred trust.

The Global Situation

The dominant patterns of production and consumption are causing environmental devastation, the depletion of resources, and a massive extinction of species. Communities are being undermined. The benefits of development are not shared equitably and the gap between rich and poor is widening. Injustice, poverty, ignorance, and violent conflict are widespread and the cause of great suffering. An unprecedented rise in human population has overburdened ecological and social systems. The foundations of global security are threatened. These trends are perilous—but not inevitable.

The Challenges Ahead

The choice is ours: form a global partnership to care for Earth and one another or risk the destruction of ourselves and the diversity of life. Fundamental changes are needed in our values, institutions, and ways of living. We must realize that when basic needs have been met, human development is primarily about being more, not having more. We have the knowledge and technology to provide for all and to reduce our impacts on the environment. The emergence of a global civil society is creating new opportunities to build a democratic and humane world. Our environmental, economic, political, social, and spiritual challenges are interconnected, and together we can forge inclusive solutions.

Universal Responsibility

To realize these aspirations, we must decide to live with a sense of universal responsibility, identifying ourselves with the whole Earth community as well as our local communities. We are at once citizens of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world. The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature.

We urgently need a shared vision of basic values to provide an ethical foundation for the emerging world community. Therefore, together in hope we affirm the following interdependent principles for a sustainable way of life as a common standard by which the conduct of all individuals, organizations, businesses, governments, and transnational institutions is to be guided and assessed.

Principles

I. RESPECT AND CARE FOR THE COMMUNITY OF LIFE

- 1. Respect Earth and life in all its diversity.**
 - a. Recognize that all beings are interdependent and every form of life has value regardless of its worth to human beings.
 - b. Affirm faith in the inherent dignity of all human beings and in the intellectual, artistic, ethical, and spiritual potential of humanity.
- 2. Care for the community of life with understanding, compassion, and love.**

a. Accept that with the right to own, manage, and use natural resources comes the duty to prevent environmental harm and to protect the rights of people.

b. Affirm that with increased freedom, knowledge, and power comes increased responsibility to promote the common good.

3. Build democratic societies that are just, participatory, sustainable, and peaceful.

a. Ensure that communities at all levels guarantee human rights and fundamental freedoms and provide everyone an opportunity to realize his or her full potential.

b. Promote social and economic justice, enabling all to achieve a secure and meaningful livelihood that is ecologically responsible.

4. Secure Earth's bounty and beauty for present and future generations.

a. Recognize that the freedom of action of each generation is qualified by the needs of future generations.

b. Transmit to future generations values, traditions, and institutions that support the long-term flourishing of Earth's human and ecological communities.

In order to fulfill these four broad commitments, it is necessary to:

II. ECOLOGICAL INTEGRITY

5. Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.

a. Adopt at all levels sustainable development plans and regulations that make environmental conservation and rehabilitation integral to all development initiatives.

b. Establish and safeguard viable nature and biosphere reserves, including wild lands and marine areas, to protect Earth's life support systems, maintain biodiversity, and preserve our natural heritage.

c. Promote the recovery of endangered species and ecosystems.

d. Control and eradicate non-native or genetically modified organisms harmful to native species and the environment, and prevent introduction of such harmful organisms.

e. Manage the use of renewable resources such as water, soil, forest products, and marine life in ways that do not exceed rates of regeneration and that protect the health of ecosystems.

f. Manage the extraction and use of non-renewable resources such as minerals and fossil

fuels in ways that minimize depletion and cause no serious environmental damage.

6. Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach.

a. Take action to avoid the possibility of serious or irreversible environmental harm even when scientific knowledge is incomplete or inconclusive.

b. Place the burden of proof on those who argue that a proposed activity will not cause significant harm, and make the responsible parties liable for environmental harm.

c. Ensure that decision making addresses the cumulative, long-term, indirect, long distance, and global consequences of human activities.

d. Prevent pollution of any part of the environment and allow no build-up of radioactive, toxic, or other hazardous substances.

e. Avoid military activities damaging to the environment.

7. Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being.

a. Reduce, reuse, and recycle the materials used in production and consumption systems, and ensure that residual waste can be assimilated by ecological systems.

b. Act with restraint and efficiency when using energy, and rely increasingly on renewable energy sources such as solar and wind.

c. Promote the development, adoption, and equitable transfer of environmentally sound technologies.

d. Internalize the full environmental and social costs of goods and services in the selling price, and enable consumers to identify products that meet the highest social and environmental standards.

e. Ensure universal access to health care that fosters reproductive health and responsible reproduction.

f. Adopt lifestyles that emphasize the quality of life and material sufficiency in a finite world.

8. Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired.

a. Support international scientific and technical cooperation on sustainability, with special attention to the needs of developing nations.

b. Recognize and preserve the traditional knowledge and spiritual wisdom in all cultures that contribute to environmental protection and human well-being.

c. Ensure that information of vital importance to human health and environmental protection, including genetic information, remains available in the public domain.

III. SOCIAL AND ECONOMIC JUSTICE

9. Eradicate poverty as an ethical, social, and environmental imperative.

a. Guarantee the right to potable water, clean air, food security, uncontaminated soil, shelter, and safe sanitation, allocating the national and international resources required.

b. Empower every human being with the education and resources to secure a sustainable livelihood, and provide social security and safety nets for those who are unable to support themselves.

c. Recognize the ignored, protect the vulnerable, serve those who suffer, and enable them to develop their capacities and to pursue their aspirations.

10. Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.

a. Promote the equitable distribution of wealth within nations and among nations.

b. Enhance the intellectual, financial, technical, and social resources of developing nations, and relieve them of onerous international debt.

c. Ensure that all trade supports sustainable resource use, environmental protection, and progressive labor standards.

d. Require multinational corporations and international financial organizations to act transparently in the public good, and hold them accountable for the consequences of their activities.

11. Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care, and economic opportunity.

a. Secure the human rights of women and girls and end all violence against them.

b. Promote the active participation of women in all aspects of economic, political, civil, social, and cultural life as full and equal partners, decision makers, leaders, and beneficiaries.

c. Strengthen families and ensure the safety and loving nurture of all family members.

12. Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health, and spiritual well-being, with special attention to the rights of indigenous

peoples and minorities.

a. Eliminate discrimination in all its forms, such as that based on race, color, sex, sexual orientation, religion, language, and national, ethnic or social origin.

b. Affirm the right of indigenous peoples to their spirituality, knowledge, lands and resources and to their related practice of sustainable livelihoods.

c. Honor and support the young people of our communities, enabling them to fulfill their essential role in creating sustainable societies.

d. Protect and restore outstanding places of cultural and spiritual significance.

IV. DEMOCRACY, NONVIOLENCE, AND PEACE

13. Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making, and access to justice.

a. Uphold the right of everyone to receive clear and timely information on environmental matters and all development plans and activities which are likely to affect them or in which they have an interest.

b. Support local, regional and global civil society, and promote the meaningful participation of all interested individuals and organizations in decision making.

c. Protect the rights to freedom of opinion, expression, peaceful assembly, association, and dissent.

d. Institute effective and efficient access to administrative and independent judicial procedures, including remedies and redress for environmental harm and the threat of such harm.

e. Eliminate corruption in all public and private institutions.

f. Strengthen local communities, enabling them to care for their environments, and assign environmental responsibilities to the levels of government where they can be carried out most effectively.

14. Integrate into formal education and life-long learning the knowledge, values, and skills needed for a sustainable way of life.

a. Provide all, especially children and youth, with educational opportunities that empower them to contribute actively to sustainable development.

b. Promote the contribution of the arts and humanities as well as the sciences in sustainability education.

c. Enhance the role of the mass media in raising awareness of ecological and social challenges.

d. Recognize the importance of moral and spiritual education for sustainable living.

15. Treat all living beings with respect and consideration.

- a. Prevent cruelty to animals kept in human societies and protect them from suffering.
- b. Protect wild animals from methods of hunting, trapping, and fishing that cause extreme, prolonged, or avoidable suffering.
- c. Avoid or eliminate to the full extent possible the taking or destruction of non-targeted species.

16. Promote a culture of tolerance, nonviolence, and peace.

- a. Encourage and support mutual understanding, solidarity, and cooperation among all peoples and within and among nations.
- b. Implement comprehensive strategies to prevent violent conflict and use collaborative problem solving to manage and resolve environmental conflicts and other disputes.
- c. Demilitarize national security systems to the level of a non-provocative defense posture, and convert military resources to peaceful purposes, including ecological restoration.
- d. Eliminate nuclear, biological, and toxic weapons and other weapons of mass destruction.
- e. Ensure that the use of orbital and outer space supports environmental protection and peace.
- f. Recognize that peace is the wholeness created by right relationships with oneself, other persons, other cultures, other life, Earth, and the larger whole of which all are a part.

The Way Forward

As never before in history, common destiny beckons us to seek a new beginning. Such renewal is the promise of these Earth Charter principles. To fulfill this promise, we must commit ourselves to adopt and promote the values and objectives of the Charter.

This requires a change of mind and heart. It requires a new sense of global interdependence and universal responsibility. We must imaginatively develop and apply the vision of a sustainable way of life locally, nationally, regionally, and globally. Our cultural diversity is a precious heritage and different cultures will find their own distinctive ways to realize the vision. We must deepen and expand the global dialogue that generated the Earth Charter, for we have much to learn from the ongoing collaborative search for truth and wisdom.

Life often involves tensions between important values. This can mean difficult choices. However, we must find ways to harmonize diversity with unity, the exercise of freedom with the common good, short-term objectives with long-term goals. Every individual, family, organization, and community has a vital role to play. The arts, sciences, religions, educational institutions, media, businesses, nongovernmental organizations, and governments are all called to offer creative leadership. The partnership of government, civil society, and business is essential for effective governance.

In order to build a sustainable global community, the nations of the world must renew their commitment to the United Nations, fulfill their obligations under existing international agreements, and support the implementation of Earth Charter principles with an international legally binding instrument on environment and development.

Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life.

ANNEX III - History

History of the Earth Charter

The Earth Charter Initiative: Brief Historical Summary

International

1945 - The United Nations was founded after the Second World War to ensure world security under three primary pillars: peace, human rights and social and economic development. (At this time the environment was not a priority)

1972 - The Stockholm Conference on Human Environment was held, and ecological security became the fourth pillar and the priority of the United Nations.

1987 - The United Nations World Commission on Environment and Development (the Brundtland Commission) called attention to the international community for the need to articulate sustainable development principles.

1992 - The Earth Summit in Rio: prior to the Earth Summit there were intergovernmental discussions, as well as civil society ones, around the possible content of the Earth Charter. However, there was not enough political agreement for this, and the drafting of the Earth Charter became an unresolved issue at this Summit.

1994 - A new initiative to create the Earth Charter was proposed, to be based on international and participatory consultation.

1997 - The International Earth Charter Commission was formed to supervise the consultation process. A first Draft of the Earth Charter was presented.

2000 - International launching of the Earth Charter

2003 - UNESCO recognized the Earth Charter as an important ethical framework for sustainable development and affirmed its desire to use the Earth Charter as an educational tool, particularly in the framework of the Decade of Education for Sustainable Development proposed by the United Nations.

In Costa Rica

1997 - August: The Ministry of Public Education (MEP)'s Environmental Education Department organized the first workshop seminar on the Earth Charter for students of secondary education.

1997 - November: The first Earth Charter workshop meeting for Costa Rican children took place in the *Museo de los Niños*.

1998 - MEP, through the Academic Education Department's Commission for Peace and Environmental Education, held a consultation with a select group of primary and secondary teachers.

1998 - A consultation was held at the University of Costa Rica with various teachers and students as well as adult students from the Integrated Aging Program.

2000 - On November 6, the formal Earth Charter was presented to the Costa Rican President Miguel Angel Rodriguez during a ceremony at the National Auditorium in the *Museo de los Niños*.

2001 - In June, the Minister of Environment Elizabeth Odio, together with the Minister of Public Education Guillermo Vargas Salazar declared the Earth Charter a document of public interest.

2002 - This Ministry of Public Education incorporated the Earth Charter as a sub-theme of the crosscutting axis "Environmental Education and Culture for Sustainable Development"

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