EDUCATION FOR SUSTAINABLE DEVELOPMENT IN THE EARLY YEARS

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Kefalas Apokoronou, Crete, Greece

EEC VAMOU
ENVIROMENTAL EDUCATIONAL CENTER OF VAMOS

Greenopolis

Erasmus+

01 ESD IN EARLY CHILDHOOD

EARLY CHILDHOOD IN THE SDGS

The United Nations Sustainable Development Goals for 2030 (SDG) include two important statements relevant to the field of early childhood development, education, and care.

Target 4.2 states that by 2030 all Member States should "***ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education***."

Target 4.7 states "***ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development***."

OMEP

Taking in consideration these statements, OMEP, the World Organization for Early Childhood Education states:

Global issues urgently require a shift in our lifestyles and a transformation of the way we think and act. With these critical outcomes in mind, it is imperative for everyone in the field of early childhood development, education and care to become as knowledgeable and skillful as possible about high quality pedagogies and curricula for Education for Sustainable Development during the early years.

We believe that children must be recognized as important agents in the shaping of a sustainable future. We would like to gladly share these outcomes with early childhood teachers, teacher educators, parents, and others who share our desire to teach young children about sustainability and to capitalize on young children's capacities to contribute to healthy environments, viable economies, and equitable and just societies.

02 ESD IN PRESCHOOL EDUCATION IN GREECE

CROSS THEMATIC CURRICULUM FRAMEWORK

CONTEMPORARY KINDERGARTEN SCHOOL implements the CTCF (Cross Thematic Curriculum Framework) of the Department of Education, Ministry of Education and Religious Affairs for the Kindergarten School, in order to serve its teaching mission seriously and consistently, At CONTEMPORARY KINDERGARTEN we aim to engage the child in the learning process by fostering and expanding children's interests. We channel energy, excitement, expression and creativity into play, singing, dancing, theater, painting, sports and gradually learning. We lay the foundations and set the goals for a warm and humane, quality and multi-faceted school, open to challenges and innovation.

03

ENVIRONMENTAL EDUCATION

PURPOSE OF ENVIRONMENTAL EDUCATION

According to Law 1892/90 and the corresponding Circulars, Environmental Education is **part of the programs of the Kindergarten, Primary and Secondary Schools**. The purpose of Environmental Education is to make students **aware of the relationship between humans and their natural and social environment**, to raise **awareness of the problems** associated with it, and to **engage in specific programs** to contribute to their overall effort to address them. As an educational process / activity it leads to the **clarification of concepts**, the **recognition of values**, the development / cultivation of the **psychomotor skills and attitudes** necessary in the decision-making process and the development of a code of conduct around environmental quality issues in individual and subsequently in group / social level.

The concept of the environment in Environmental Education is treated with its holistic dimension and includes the following aspects: **Natural, Man-made / Constructed, Socio-economic and Historical environment**. For this reason, each issue / problem is studied in a **cross-curricular** and **interdisciplinary way**.

AXES OF COGNITIVE CONTENT

1. Air-Atmosphere - Climate change
2. Water
3. Terrain
4. Forests
5. Biodiversity- The extinction of species
6. Energy
7. Waste management
8. Human activities
9. Human relations and values

GENERAL TARGET (KNOWLEDGE, SKILLS, ATTITUDES AND VALUES)

1. Interaction, change, balance, system, space, time
2. Circle, system, space, time, unit, set, change, culture
3. Space, time, sorting, change, unit, set, sustainability
4. Interaction, system, unit, set, change, space, time, culture, protection, sustainability
5. Interaction, change, balance, system, space, time
6. Classification, interaction, system, change, space, time, protection, respect
7. System, evolution, economy, communication, space, time, unit, set, sustainability
8. Space, time, system, unit, set, aesthetics, communication, culture, balance, protection, responsibility
9. Freedom, independence, cooperation, interaction, communication, unit, set,culture, respect, solidarity

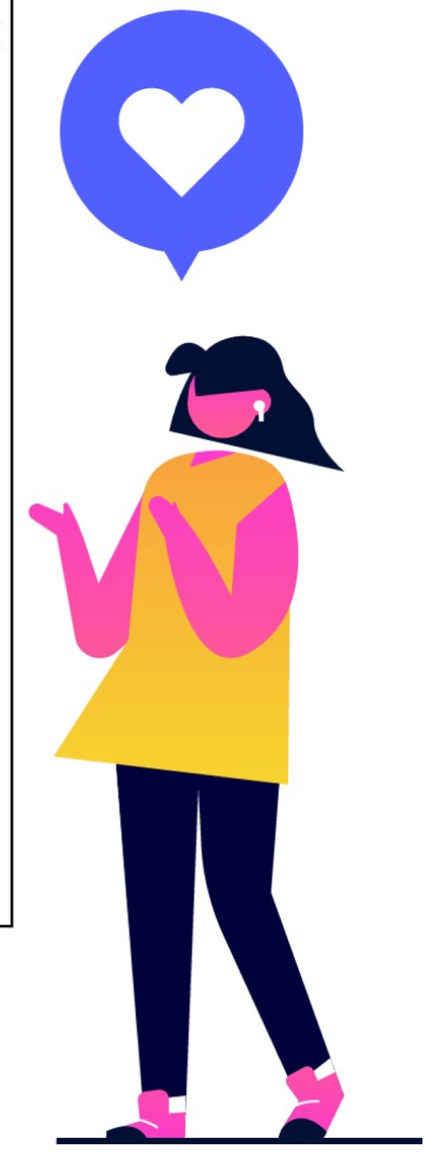
BASIC PRINCIPLES OF ENVIRONMENTAL EDUCATION

- The c**ross-curricular** and interdisciplinary approach to the issue / problem.
- Emphasis on **students' active participation** and use of active methods: discussion – debate, opinions, research, critical evaluation and action.
- Orientation towards the **prevention or resolution of environmental issues** or problems.
- Focus on **sustainable environmental management** and development.
- Focusing **attention on the present and future state of the environment**.
- I**mmediate action at local level** with long-term results at national and global level.
- Raising awareness of the **rational use of natural resources** and the "proper use" of Technology.
- Providing equal opportunities to acquire the **knowledge, skills, values and attitudes needed to protect the environment.**
- Promoting **collaboration**, cultivating **values** and creating new models, a**ttitudes and behaviors** of individuals, groups and society towards the environment.
- The **opening of the school to society** and life

Objectives, Topics, Indicative Activities

Objectives	Topics	Indicative activities
➢ Get to know the components of the air and their properties. ➢ To distinguish between the concepts of weather and climate. ➢ Observe, record climatic data and measurements: temperature, humidity, wind direction, amount of rainfall, cloudiness. ➢ Organize files. ➢ Become familiar with the microclimate processes of their school district. ➢ Record the main air and air	***Air / Atmosphere / Climate Change*** ⇒The components of air Pollution of air in indoor spaces ⇒Pollution of air in cities. ⇒The concepts of weather and climate. ⇒Manufacture of simple meteorological instruments and taking measurements ⇒The relation of weather and climate to the movement of the Earth ⇒Upcoming climate	Development of a working plan on the subject of "Protection of the Atmosphere - Climate Change".
pollutants. To record human interventions that cause climate change. Record the effects of climate change. Make use of weather forecast information. Make them aware of the measures to protect the air and propose solutions.	changes due to ozone layer depletion and the greenhouse effect, as a result of human interventions - The correlation of climatic conditions with production, construction, floods, sports, tourism, natural and anthropological traits and health.	

Objectives	Topics	Indicative activities
➢ To record animals, plants, their ➢ micro-organisms of a habitat ➢ /ecosystem. ➢ Recognize the causes of extinction of species. ➢ Record what species are at risk of extinction. ➢ Getting to know the habitats -wetlands of their area. ➢ Link the local to the national and world flora and fauna. Become more sensitized in taking measures for the protection of flora and fauna.	***Biodiversity*** ***Endangered species*** ⇒Biodiversity ⇒Endangered species ⇒A biotic and biotic agents for ⇒life development ⇒Flora and fauna of the place ⇒Food chains ⇒Species in danger of extinction ⇒and the causes of their disappearance ⇒Consequences of human intervention. ⇒For the extinction of species ⇒Protection measures for flora and fauna -	Field study on the topic "The local ecosystem that is in danger"



Objectives	Topics	Indicative activities
➢ Record energy sources. ➢ Separate the mild, alternative forms of energy from the conventional ones. ➢ Record energy needs on a personal and social level. ➢ Record and evaluateadvantages and disadvantages of mild, alternative energy sources. ➢ Make them more aware of taking measures to reduce energy consumption and of its rational use. ➢ List the advantages and disadvantages of using nuclear energy. ➢ Be informed about the energy policy of other countries.	***Energy*** ⇒ Energy sources ⇒ Natural mineral resources ⇒ Unequal distribution of natural mineral resources ⇒ Overuse of natural mineral resources ⇒ Consequences of combustion of raw materials ⇒ Mild, alternative forms of energy ⇒ Energy Uses: Buildings / Residential- ⇒ Transport-Industry ⇒ Nuclear Power: Uses and risks.	Development of project on the topic "The Energy Problem: - Energy - Overexploitation of natural minerals resources - Soft and alternative forms energy” Problem Solving On the topic “Use of Energy – Pollution of air, water and soil”

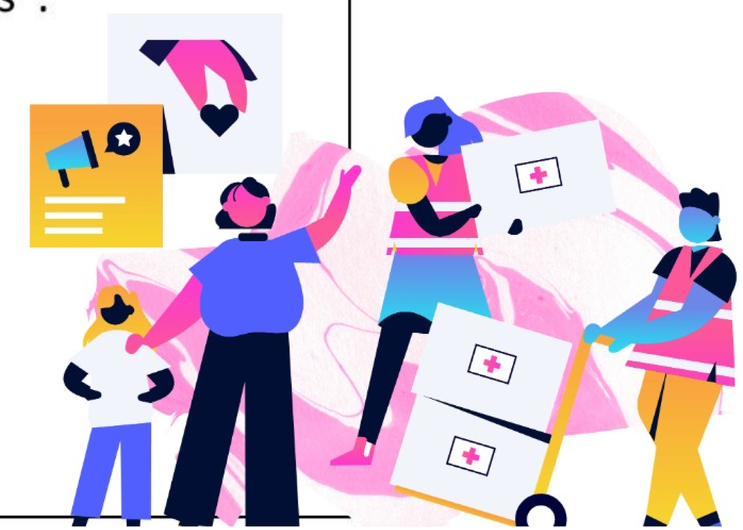
Objectives	Topics	Indicative activities
➢ Know and classify forest species. ➢ Know the species of Mediterranean forest flora and fauna. ➢ Document the dangers that the forests are under, to propose solutions and to take action. ➢ Describe human interventions in forests. ➢ Mention the role of the forest. Evaluate the usefulness of the forest. ➢ Cultivate responsibility for the protection of the forest and its sustainable management	***Forests*** ⇒Forest –Development – Environment Urban and Exurban green, Forest types and their management, ⇒Mediterranean forests ⇒Environmental, productive, socio-cultural functions of the forest ⇒Dangers of forests: fires, over-logging, overgrazing, encroachment. ⇒Positive human intervention in the forests. ⇒Declaration of principles for the protection and development of forests - Reforestation - Sustainable forest management	Problem Solving on the topic "Dangers for the forest and taking measures for their sustainable management"

Objectives	Topics	Indicative activities
➢ Interpret the water cycle. ➢ Record the variety of uses of the water. ➢ Recognize the causes of water pollution and contamination. ➢ Sensitize them in taking measures for water pollution and contamination. ➢ Realize the importance of water. ➢ Cultivate attitudes towards water economy and become more aware of its rational management.	***Water*** ⇒The water cycle and factors that disturb it ⇒Water is the source of life ⇒Surface and groundwater: Lakes, rivers, seas, springs, aquifers ⇒Drinking and thermal water. ⇒The lack or inadequacy of water ⇒Causes of water quality deterioration ⇒Pollution and water pollution ⇒Water as a natural habitat ⇒Water and agricultural crops ⇒Household and industrial use of water ⇒The historical importance of water in social, economic and cultural evolution.	Field study (Lake, river, sea and coasts). Resolving a local problem of pollution / contamination of lake/river etc).

Objectives	Topics	Indicative activities
➢ To record the type of waste whose management protects the environment. ➢ Get to know the modern ways of waste management. ➢ To reflect on the causes and the risks that stem from poor litter and waste management. ➢ To realize the environmental and financial value of recycling. ➢ Practise in realizing that keeping their school, neighborhood and their area clean, is basically an individual and then a social responsibility.	***Waste and litter management*** ⇒Litter management ⇒Solid waste management, aquatic sewage, toxic chemicals and of radioactive waste ⇒The situation in Greece today ⇒The landfill of waste ⇒Biological purification ⇒The role of the citizen in recycling ⇒Recycling of materials: a. aluminum b. paper c. glass d. plastic.	Case study on "Litter management in my area " Field study in an area of production of goods and update on anti-pollution measures (biological cleaning, filters, antifouling technology)

Objectives	Topics	Indicative activities
➢ To distinguish between local, national and world bas-relief. ➢ Indicate the types of rocks and soils of their place. ➢ To investigate the causes of soil erosion. ➢ To identify the causes of soil pollution. ➢ Be informed about the phenomenon of desertification and the factors that cause it. ➢ To document the consequences of poor land management. Become aware of ways of soil protection.	***Terrain*** ⇒Physical, geological and historical study of local, national, global bas-relief ⇒Types of soils and rocks Extraction of rocks, minerals. ⇒Relief Management: Crops, Drainage, Construction, Roads, Tunnels, Airports ⇒Consequences of mismanagement of the Earth ⇒Soil erosion ⇒The phenomenon of desertification.	Case study of an area with obvious evidence of poor soil management: Causes-Consequences-Solutions.

Objectives	Topics	Indicative activities
➢ Identify and describe human activities and relationships /interactions in a man-made, constructed environment over time. ➢ Record construction materials and the various characteristics of operation of various buildings. ➢ Assess safety and functionality of constructions in relation to environmental and aesthetic perception. ➢ Be informed of the principles of construction, in relation to health, the economy and the conservation of the natural environment. ➢ Relate the constructed / man-made environment with natural disasters. ➢ Connect the Constructed / Man-made environment with quality of life.	***Human activities*** ⇒ Human activities ⇒ History of urban areas and constructions ⇒ Study of structured spaces and functions that take place in them ⇒ Design of buildings, cities, large projects related to the environment ⇒ Security and functionality in combination with environmental and aesthetic perception of construction ⇒ Relation of used materials - ⇒ pollution-economy ⇒ Relation between building-pollution -economy - quality of life ⇒ Correlation of Constructed / Man-made environment with natural disasters ⇒ The relation between constructions and the Natural and Social environment.	Development of project on the topic “Evolution of residency in relation to the environment" Development of project on the topic “Cases of Disturbance of the balance of nature from construction works being done in our area: Causes-Consequences-Solutions”.



Objectives	Topics	Indicative activities
➢ To explore, analyze and interpret the conditions of human living, the demographic problem, human values. ➢ To record the social problems they encounter around them. ➢ To distinguish the different cultures, lifestyles and different perceptions of other people. ➢ To realize their role in addressing social issues and suggest solutions. ➢ Develop positive attitudes and behaviors for the different people living and working in our country. ➢ To cultivate skills to protect cultural heritage and individual, human and social rights. ➢ To point out the modern ways of communication and to discuss their positive and negative effects.	***Human relations and values*** ⇒ Social and economic dimensions of the development and environmental issue. ⇒ International cooperation (North-South, East-West) ⇒ Poverty and environmentally unfriendly consumer standards ⇒ The demographic factor and ⇒ human health ⇒ Human living conditions ⇒ Strengthening the role of the great social groups: The role of women, children and young people in continuous growth ⇒ Human Values - Gender Equality - Minority problems – Social Problems - Causes and effects ⇒ Social organization: Cultivation of ⇒ individual and social responsibility, self - discipline, taking action for the ⇒ environmental and social issues ⇒ Media and communication codes ⇒ Tourism and sustainability.	Role play on the theme "Obligations and rights of children" Development of project and exhibition on the theme "The various nationalities of my area – Elements of their culture, habits and customs" Discussion on the topic "The positive and negative elements of tourism in our area"

THANK YOU!