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# "Hand in hand for Ecofriendly Schools"

# **"GREEN SKILS"**



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# **INTRODUCTION**

Climate change and environmental degradation are issues we face nationally and internationally. Climate change poses major challenges, that will mark future generations. Their approach must be taken into account radical changes both economically and socially. Education is one from the pillars of improving the response to climate change, through change human behavior, in order to protect nature and resources. Humanity is simultaneously facing two major crises - climatic and environmental, both of unprecedented magnitude and urgency. The scientific community drew in repeated attention to the devastating effects of climate change and environmental degradation have on people's lives and well-being.

The activities carried out within our project aimed at increasing the level of education and awareness regarding climate change, offering a perfectible basis to prepare well-informed future citizens, responsible and involved in combating change climate, environmental protection, transition to an economic growth model sustainable, as well as a sustainable lifestyle,

#### **Definition of green skills**

Green skills are the knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resourceefficient society.

#### Sustainability and environmental awareness

Sustainability is the ability to exist and develop without depleting natural resources for the future. The United Nations defined sustainable development in the Brundtland Report as a development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It assumes that resources are finite and therefore should be used conservatively and carefully to ensure that they are sufficient for future generations without diminishing the quality of life in the present. A sustainable society must be socially responsible, focusing on environmental protection and dynamic balance in human and natural systems.



# Importance of the education system for green skills

Competences for the formation and appropriation of a culture of sustainability are developed through education. Whether we address children, teenagers or adults, at school or at home, through courses or extracurricular activities, the skills and attitudes to protect the environment and sustainable thinking are formed constantly, constructively, through the permanent highlighting of problems and solutions that depend on each of us.

According to European citizens, climate change is one of the major problems we face today. Education and training, like all sectors, must take action to respond to this planetary crisis.

The educational system contributes to development students' skills of inter- and transdisciplinary investigation a the surrounding reality and the formation of responsible behaviors towards the environment, by developing their ability to:

a) understand and use basic concepts related to the environment and climate change for to be aware of the fact that climate change is an emerging problem of humanity, as well as to understand the measures to combat them;

b) understands environmental legislation and the role of authorities, institutions, companies, organizations non-governmental and other actors in combating climate change and protecting the environment;

c) understand climate change in a global, systemic context and in connection with others areas/problems/themes such as: irresponsible exploitation of natural resources, pollution, food waste, waste management, sustainable consumption and production, biodiversity, forests and terrestrial life, waters and aquatic life, natural disasters, green energy, social justice;

d) explore/investigate the environment and relate positively to the natural environment;

e) make decisions and act day by day taking into account the impact on the planet, adopting a behavior to protect and improve the quality of the environment, including use responsible for natural resources;

f) adapt to extreme weather phenomena and respond to potential natural disasters;

g) initiate and carry out individual and/or team civic actions to combat changes climate and environmental protection; h) participate, in the future, in the development of public policies and in the development of new technologies that to contribute to combating climate change and environmental protection.



# PART 1: WHAT ARE GREEN SKILLS?

# Definition and importance of green skills

Competences for the formation and appropriation of a culture of sustainability are developed through education. Green competences are skills and knowledge that enable all activities to be carried out in an environmentally friendly way.

#### **Basic green skills:**

#### Environmental sustainability

Sustainability refers to the ability to meet the needs of the present without compromising the environment and the resources of future generations. At the macro level, it represents the opportunity to exist and develop society in a sustainable way that respects the biosphere and natural resources. In everyday life and work, sustainability is how we manage our actions so that we can have a positive impact on our environment and communities. Sustainability is important to each of us. First, protecting the environment is essential for our survival and that of future generations. Excessive waste, air pollution and climate change can have devastating effects on the planet and by implication our health and well-being. Sustainability can also bring economic benefits by optimizing processes, reducing costs and creating green products and services.

# Energy efficiency

Energy efficiency is the art of using the least amount of energy possible to meet our needs for light, heat, cooling and general comfort. Use of energy efficiency or saving of energy is the goal of reducing the amount of energy needed for the provision of products and services. For example, isolate ea of a house allows a building to use less energy for heating and cooling, to achieve and maintain keep a comfortable



temperature. Lighting installation with LEDs, fluorescent lights or natural skylights rale reduces the amount of energy needed to reach the same level of illumination compared to using light bulbs traditional incandescents. There are many motivations for improving energy efficiency. Reducing consumption of energy reduces electricity costs and can leads to financial savings for consumers, if eco- energy costs outweigh any additional costs ready to implement an efficient technology from the point energetically.

Reducing energy consumption it is also seen as a solution to the problem of reducing emissions of greenhouse gases.



#### Recycling and waste management

Recycling is the process by which waste is transformed into new materials and objects. Its aim is to reuse existing materials instead of creating new ones, in a sustainable and economical way. In the context of reducing the amount of waste, recycling is the penultimate component of the hierarchy. The 5 R's of waste reduction are Refuse, Reduce, Reuse, Recycle and Rot. Refuse refers to the lack of consumption, so that there is no product that goes to waste. Situations in which you can refuse include shopping at the supermarket, when you are offered a plastic bag, or going out, when the bartender wants to put a straw in your cocktail. Redu is the action of not using so many harmful products. Examples include single-use plastic, certain cosmetic products, the papers you print documents on, fast fashion clothing or convenience foods. Reuse means



reusing certain containers or packaging. This can be done in 2 ways: either you continue to use an object for the same purpose it was created for, or you reinvent it. In the first situation we can include a jar that, once emptied, is washed and used to store another jam, another sauce, etc. The other option requires a little creativity: think tires that are turned into stools. Recycle should be the action that occurs after the previous steps have been completed. From plastic, glass, paper and aluminum to batteries, textiles or even oil, there are many materials that can be recycled. Last but not least, let it rot refers to organic waste. These can be turned into fertilizer either at home or at compost centers.

The benefits of recycling are multiple and it is very important for each of us to understand the impact of recycling on both the environment and the country's economy.

The environmental benefits of recycling include:

- through recycling, the deposition of waste is considerably reduced, which not only pollutes the environment, but also affects the health of those who live near them;
- > by recycling, we reduce the pollutants usually released into water and air by depositing waste in landfills;
- > recycling helps to save energy consumption;
- > recycling conserves the Earth's natural resources

Waste management, also known as waste management, refers to education regarding the collection, transport, treatment, recycling and storage of waste, referring here to materials resulting from human activities and reducing their effect on human health, the environment or the appearance of a habitat.



# > Water conservation

Water plays an important role in many processes on the planet, being essential for both organic and inorganic matter. We are responsible for preserving water quality for future generations! Water is a limited natural resource! Why? Because the fresh water we use comes from the hydrological cycle, which in turn produces a fixed amount of water in a certain period of time. Accessed quantity cannot be influenced by human activities. That is precisely why fresh water resources must be seen as a valuable asset, water being crucial to human existence. Water conservation represents all the measures that are applied for the efficient



use of water. This means a series of actions, behavioral changes, technologies and improved projects to help reduce water loss (due to wastage or leakage) and increase the efficiency of its use and reuse. Improving water management practices, resulting in the reduction of water demand/requirement, can essentially contribute to the conservation of water resources. In this sense, reducing water waste is much more important than restricting its use. Examples of water conservation measures would be: repairing leaky faucets, replacing bathroom flushing with showering, using low-flush water tanks in toilets, and using washing machines and dishwashers only at full load.

# Living in harmony with nature

Sustainable human development means living in harmony with nature One of the most important aspects of human development reformulation is to emphasize the need for fairness towards nature and other living beings. We can only be developed if our life becomes reconnected and in balance, cooperation and harmony with nature Sustainable development is guided by the principles of equity within and between generations. In in the face of development, we are all equal, we have the same rights to a healthy life, conditions of environmental, economic and social benefits. Equity with future generations requires planning natural resources with great care and over a long period of time. But, it is necessary to find one balance point between total conservation and renouncing the interests of the present generation and o irrational exploitation of all resources.





# **PART 2: INTEGRATING GREEN SKILLS INTO EDUCATION**





Ecological education in school represents a constant concern in all categories of activities. Since the issue of the environment has a multidisciplinary character and great complexity, a rapid and difficult to predict evolution and a priority character, the contents must be related to the future of the planet and the survival of the human species.

The objectives to be pursued in the school are:

- environmental "literacy";
- awareness of the diversity and importance of ecological problems, as well as of human behaviors that affect the environment;
- correct understanding of the average individual ratio;
- developing respect for the environment and responsibility;
- critical analysis of environmental issues;
- developing the ability to make decisions, etc.

Starting from the premise that the school of the third millennium is centered on the student - that is, on the learner - it is necessary to replace the encyclopedic nature of the educational act with an active process that involves both mental and physical activity, forming necessary capacities and competences during whole life: to observe and analyze, to interpret, to compare, to select, then to generalize, to communicate, to cooperate, to initiate and complete a project. Thus, an interdisciplinary approach to the problems to be studied is required, as well as the partnership between professors from certain disciplines.

# Integration of green skills into lessons

Ecological education is one of the objectives found in all educational disciplines. Interdisciplinarity gives us the opportunity to present objects and phenomena to students in an inter-conditioning relationship and make them understand the danger of natural imbalance determined by human influence. Ecological education is one of the objectives that can be found in all educational disciplines. Interdisciplinarity gives us the



opportunity to present objects and phenomena to students in an inter-conditioning relationship and make them understand the danger of natural imbalance determined by human influence.

- Texts from literature, poems, fantastic events from fairy tales, descriptions, all create an affective atmosphere, generating feelings of admiration for nature. Nature is the one that offers shelter both in good and bad, and to those who respect it and to those who wrong it, like a wise man who waits patiently for all beings to wake up from ignorance. She suffers in silence and heals her wounds so that she can always be welcoming to those who take refuge in her midst, admire her, sing her, paint her or ensure their existence. Studying texts about nature mobilizes students both emotionally and intellectually.
- Geography contributes to the identification and explanation of some findings and truths, results of the interaction between the components of the natural terrestrial environment and those of society, as well as global human-nature interaction (examples of effects of human activities on the environment and quality of life; identifying problems existing in the environment, identifying environmental protection solutions geographically from the local or distant horizon).
- Counseling and personal development contributes to the adoption of a responsible attitude towards own health and the environment, from the perspective of well-being by adopting a style of healthy living and risk behavior management.
- Biology caring for the environment (skills: protection and conservation the environment; organism-environment relationship).
- Art classes the relationship between man and nature (the eulogy brought to the beauty of the plant and animal world doubled by the intention to emphasize the need for reconciliation between the human desire to expand, to modify the environment and preserve the integrity of the natural balance.
- Disciplines from the curriculum at the school's decision organization of activities ecological; establishing some rules of conduct towards the environment; illustration of some data important from the calendar of ecological activities; organization of poster and material contests advertising to publicize the effects of pollution in the area; creating and performing skits, dramatizations, on ecological themes; selective waste collection; making some models and some advertising items from waste; organization of contests

# **Project-based learning**

Project-based learning, or PBL for short, is a teaching method in which students learn by engaging in real-world and personally relevant and meaningful projects. Students work on a project over an extended period of time, answering interesting and complex questions or solving a real-world problem through inquiry, investigation and critical thinking.

Project-based learning can encompass a variety of mediums and cover so many different topics that allow students to engage with their education as well as their school and community:





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- > Students design a smart garden for their school.
- > Plant and manage a garden to help feed the homeless.
- > Develop a new invention from recycled materials.
- > Redesign public transport in your city or town so that it becomes sustainable.
- Design a new recycling program for your school.
- > Come up with a plan to reduce water consumption in your school.
- > Design a system to reduce your carbon footprint at home and at school.

# **Teaching methods**

**Design and planning:** Teachers create or adapt a project to meet the needs of the curriculum and the needs of their students. Teachers also plan how it will be implemented, leaving room for student choice and input.

Align with standards: Teachers use standards to plan and ensure the project addresses key points of understanding.

**Build the culture:** Teachers make students explicitly aware that they will be independent and rely on inquiry, teamwork, positive thinking and attention to quality to succeed.

Manage the activity: Teachers work with students to organize, set goals, schedules and deadlines, find and use resources, create meaningful projects and make them public.

Assess student learning: Teachers use formative and summative assessments throughout the process to measure knowledge, understanding, and collaboration. Students will also self-assess and assess themselves.

Encourage and coach: Teachers learn and create alongside their students and help when encouragement is needed.

# Active learning strategies

Through interactive strategies, students are put in the situation of a to observe, to analyze, to investigate phenomena and processes in the environment, practicing intellectual work skills, simultaneously with training responsible individual, group and community behavior, desirable in relation to the environment. The various contents, with a high degree of applicability and usefulness, respond to the knowledge interests of the



students, by ways of approaching them, by using some strategies didactic interactive and the promotion of values related to the school community required by society.

Problematization, brainstorming, heuristic conversation, discovery (inductive, deductive, analogical, transductive), the experiment, the case study



are some of the didactic methods recommended for carrying out the learning activities proposed by to the teacher in order to train specific skills and general.

# Hands-on experiments - GREEN YOUR HOME - SCHOOL

Our fast-paced society is full of items that can make our lives easier, from fast food packaging to cups to disposable shopping bags. But these useful products and all the other disposable items we use can end up in landfills. Disposing of them costs money and creates environmental problems. Storage area. Reducing waste can also save you money by reducing collection and disposal fees. Improving the way you dispose of waste is an important way to help our environment. Reducing waste, reusing items, recycling and composting saves natural resources and energy.

- 1. Give up single-use plastic items It is very easy to use disposable plastic products, without the need to clean them afterwards. However, this habit that we have developed in the last decades has led to the pollution of the environment. When you think of organizing a picnic or a barbecue, try to find other options for the well-known plastic plates and cups. A more environmentally friendly option is that of paper household items (biodegradable).
- 2. With onion leaves boiled in water, a natural dye can be obtained to be used on fabrics or for painting on canvas and paper. Did you know this? You can try and you will be convinced.
- 3. The jar became a candle holder You know that jar in which you had the vegetable stew? Do not throw it in the trash. Wash it well until all traces and smells disappear, paint it in an original way, add decorative elements and you can have a sensational candle holder.





- 4. Do you have an old tree in your yard that no longer bears fruit? Have you tried all methods and failed to save him? Don't despair. You can turn its trunk into a planter. You can cut the tree from a higher height than the ground, then drill holes in the remaining stump in order to plant flowers. Your imagination has no limits.
- 5. Refrigerator deodorizer Dried coffee grounds and ground coffee, even soluble, are a natural deodorizer for the refrigerator. Just fill a small bowl with ground coffee and put it in the fridge for a few days. The same trick can be used for the shoe rack, basement or other areas of the house.
- 6. grow plants at home that you can use as ingredients in food Where you plant it: Tall pot, planter, garden. When: March August. The first shoots appear after 2-3 weeks. Preferences: A windowsill where the light reaches, but is not touched by the sun's rays. It needs temperatures of 5-20 degrees Celsius for germination. How often do you use it: Daily. The soil should never dry out completely. When you can put it in food: You can enjoy the fresh aroma of parsley leaves for 4-7 months.
- 7. Purchase and use school supplies made from recycled items, such as pencils made from old blue denim and folders made from old shipping boxes.
- 8. You can make a pencil holder, a make-up box and a toy from the finished shampoo box.
- 9. Fruit and vegetable waste, as well as coffee grounds, tea bags, and egg shells can be composted. Keep meat, bones, grease, fats, oils, and dairy products out of the compost because they can turn rancid and attract rodents and other pests.
- 10. Mixed paper (Includes white and colored paper, magazines, and newspapers) can be recycled. Most can also be composted if they are clean and cut into small pieces or shredded.

# Nature walks

**Excursion in the Danube Delta** - The Danube Delta is the second largest in Europe and one of the few in the world that has preserved a great biodiversity. It has more than 30 ecosystems in which 5,429 species live, of which 1,839 are part of the flora and 3,590 of the fauna. We took a boat trip in the Danube Delta and we enriched our knowledge about biodiversity and the importance of its conservation.







Visit to the Botanical Garden - We visited the botanical garden and learned about biodiversity





#### Student projects and presentations

> STOP FOOD WASTE - Activity within the OZONE club, a club established within the ERASMUS project Hand in Hand for Eco-friendly Schools



WORLD WATER DAY is marked every year on March 22. Water is an essential element in sustaining life, it is vital for creating jobs and supporting economic, social and human development





# > 15 MAI WORLD CLIMATE CHANGE

Climate shifts like heat waves could restrict the ability of people to work outdoor, and, in extreme cases, put their lives at risk. Under a 2050 climate scenario developed by NASA, continuing growth of the greenhouse emission at today's rate could lead to additional global warming of about 1.5 degrees Celsius by 2050.



WORLD ENVIRONMENT DAY - On June 5, we celebrate World Environment Day. Established by the United Nations in 1972, this day is the largest international environmental event, attended by millions of people around the world. It has evolved into a prominent global platform for promoting awareness of environmental issues.







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# PART 3: GREEN SKILLS IN SCHOOL CULTURE

#### School gardens and interaction with nature

When students participate in gardening, they make even stronger connections with the environment. They can feel the earth, shape it, be observant. In addition to all these things, many aspects learned in school can be further developed in the garden. From applying math by counting seeds, measuring soil volume, to science concepts such as understanding how plants need light or water to grow. The whole sensory experience also contributes to the development of motor skills.

The school garden has become much more beautiful thanks to the involvement of students and teachers. Students need to acquire/improve their knowledge and awareness of environmental degradation!





#### **Recycling programs and waste management**

# THE SEPARATE COLLECTION SYSTEM WITHIN THE SCHOOL



#### WHAT WE RECYCLE?

• Paper/cardboard (notebook sheets, book sheets, newspapers, magazines, milk and juice boxes, cardboard, paper bags and other paper food packaging) are thrown in the bin BLUE, mandatory inscribed - "paper-cardboard"

• Plastic (plastic juice or water bottles, plastic casseroles, pens, bags of plastic, other plastic food packaging, book and notebook covers, other articles desk, etc.) are thrown into the YELLOW bin, mandatory marked "plastic/metal"

• Glass (jars, bottles, etc.) is thrown in the GREEN bin, which must be marked "glass"

• Metal (ferrous and non-ferrous; e.g. aluminum cans, cans, metal clips, foil aluminum) are thrown, together with the plastic, also in the mandatory YELLOW bin marked "plastic, metal".

• Food and household waste (fruit and vegetable scraps, food scraps, other non-recyclable waste) in the BLACK bin, necessarily labeled "residual waste", placed as densely as possible, in classrooms and laboratories, in toilets, on the aisle, in the chancellery, dining areas, changing rooms, gyms, the courtyard school etc

Students are trained to:

• press the waste (paper, plastic, metal) BEFORE throwing it in the bins colored (according to the markings), to save space.

• throw away paper soiled with food scraps (for example dirty napkins) in the household waste bin (so as not to soil all the paper in the bin)

• regarding cartons of milk or juice, they will be instructed to close these boxes after consumption, so as not to spill the rest of them into the blue bin (for paper)





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In the current context of increasing concerns about environmental protection and reducing energy consumption, it is becoming increasingly important to adopt effective energy saving practices such as:

- 1. Turn off the light
- 2. Use the stairs instead of the elevator
- 3. avoid food waste
- 4. reduce the consumption of hot water
- 5. recycle packaging
- 6. Unplug electronics when not in use

7. use alternatives to the personal car, such as public transport, cycling or walking

Every year, on June 3, WORLD BICYCLE DAY is celebrated. To mark this day,

the School Council of the Students of the Ion Ghica Economic College, initiated an information and promotion campaign for the use of the bicycle as a sustainable, accessible and favorable means of social inclusion, economic and healthy.



# Community projects and environmental cleaning activities

- NATIONAL CLEANING DAY The largest national mobilization for nature in Romania
- TREES PLANTING CAMPAIGN





# PART 4: THE ROLE OF PARENTS AND THE COMMUNITY

# **Raising parent awareness**

- Sensitization and awareness campaign for adults regarding the need to protect the environment during meetings with parents;
- > Distribution of flyers on recycling and reuse methods;

# **Participation in community projects**

Circular economy fair - activity carried out with the aim of reducing the consumption of resources necessary for the creation of new products, by reusing existing products.









Circular Economy Fair: Events such as the "Circular Economy Fair" contribute significantly to students' development of green skills. Such fairs offer students the opportunity to practically learn environmentally friendly practices, sustainability concepts and issues related to the efficient use of resources. Here are some points on how these events contribute to the development of green skills:

1-) Raising Awareness: Circular economy fairs raise students' awareness of issues such as waste management, recycling, reuse and sustainable production. This increases environmental awareness and encourages students to make more sustainable choices in their daily lives.

2-) Problem-Solving Skills: Students analyze real-world problems related to circular economy concepts and try to develop solutions. This process develops their critical thinking and problem-solving skills.



3-) Innovation and Creativity: Circular economy fairs encourage students to develop innovative ideas. For example, they can work on creative projects such as designing new products from waste materials or finding ways to use resources efficiently.

4-) Collaboration and Teamwork: Fairs are often organized as group projects, which gives students experience in collaborating and working in teams. It helps them understand the importance of social cooperation for developing green skills.

5-) Applied Learning: Students learn circular economy principles in practice outside the classroom. This allows them to see how theoretical knowledge is used in practice and to develop the skills to apply this knowledge in real life.

6-) Career Opportunities: It inspires students who have the potential to pursue a career in the circular economy and sustainability fields. They learn about professions related to the green economy and may consider pursuing a career in this field.

Such events help students gain the knowledge and skills that will contribute to future sustainable development goals.





**Visit to the farm and stud farm** - from farm to fork,



# **Collaborations with local organizations:**

**Expansion of Ecological Institution Gardens** carried out within the OZON Environment Club, with the support of Deputy Mayor, in partnership with Seroplant Braila.









Activities carried out in partnership with the Panait Istrati Brăila County Library, BRAILA LOCAL COUNCIL AND TOWN HALL





# Collaboration with the BRAILA COUNTY CREATIVE CENTER - The cloth workshop

