

**GREEN MANAGEMENT IN
SCHOOLS FOR SUSTAINABILITY
2022-1-RO01-KA220-SCH-000088088**

GIFs Toolkit





CONTENTS

ABOUT THE PROJECT ...

INTRODUCTION ...

FORMAL-NON FORMAL AND INFORMAL EDUCATION ...

MODULE 1: ICE BREAKING AND TEAM BUILDING ...

Theoretical Part ...

Practical Part ...

MODULE 2: RECYCLING ...

Theoretical Part ...

Practical Part ...

MODULE 3: BUILDING ENERGY EFFICIENCY ...

Theoretical Part ...

Practical Part ...

MODULE 4: FOOD AND CONSUMABLE EDUCATION ...

Theoretical Part ...

Practical Part ...

MODULE 5: BIODIVERSITY PROTECTION ...

Theoretical Part ...

Practical Part ...

MODULE 6: STAY INFORMED ...

Theoretical Part ...

MODULE 7: CLOSING ...

Theoretical Part ...

Practical Part ...

MODULE 8 – EVALUATION ...

Theoretical & Practical Part ...



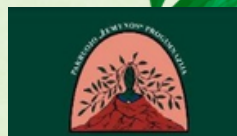
ABOUT THE PROJECT

The project GIFs represent an innovative and transformative initiative aimed at enhancing the awareness and capabilities of school staff and teachers in adopting green building practices. Through engaging and informative materials, this project endeavors to equip educators with the necessary knowledge and competences essential for integrating sustainable practices into their educational institutions.

By leveraging various methodologies and approaches, the project seeks to actively involve students in the implementation process, fostering a sense of ownership and responsibility towards environmental stewardship. Through hands-on experiences and interactive learning, students can become active participants in the transformation of their school environment into a greener and more sustainable space.

Furthermore, the project aims to empower school staff and teachers with not only theoretical knowledge but also practical methodologies and strategies for initiating and sustaining green building initiatives. By providing comprehensive guidance and resources, educators can embark on a journey towards creating eco-friendly learning environments that inspire and empower future generations.

Ultimately, the goal is to cultivate a culture of sustainability within educational settings, where schools serve as models of environmental responsibility and innovation. Through the collective efforts of staff, teachers, and students, educational institutions can become true agents of change, driving positive impacts not only within their immediate communities but also on a larger scale.



INTRODUCTION

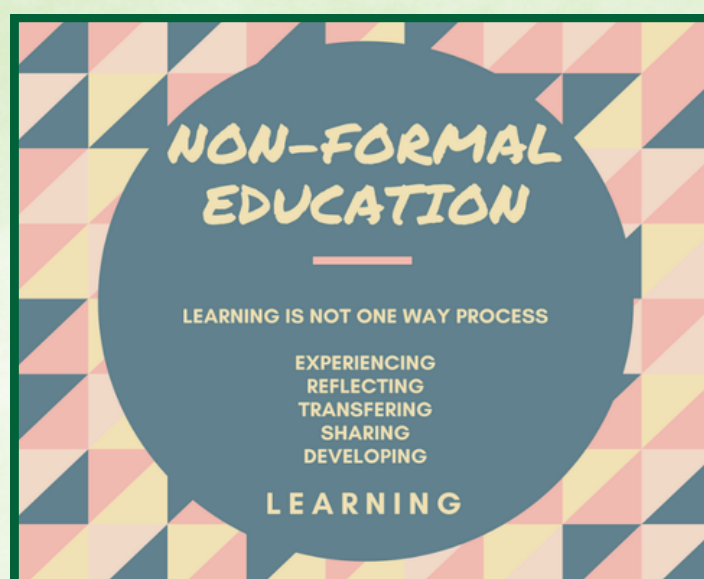
FORMAL-NON FORMAL AND INFORMAL EDUCATION

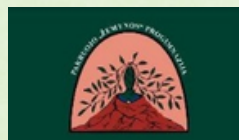
School serves as the starting point and reflection mirror of society, making the management of change at the school level a perpetual challenge.

The climate crisis exemplifies the urgency; today's students, the future citizens, cannot afford to wait. As a state, we must direct change towards them, acknowledging that this generation will endure the crisis's real effects. Students, in this context, act not only as future citizens tasked with improving the planet but also as Trojan horses, enabling outreach to families and non-standardized education-resistant adults.

NON-FORMAL EDUCATION (NFE):

NFE, based on experience over an extended period in environments beyond schools, lacks a specific definition but aligns with key practices outlined by the Council of Europe Symposium in 2011:





- Balanced co-existence of cognitive, affective, and practical dimensions of learning
- Linking individual and social learning with partnership-oriented, solidary, and symmetrical teaching/learning relations
- Participatory and learner-centered approaches
- Holistic, process-oriented, and close-to-real-life concerns
- Voluntary and ideally open-access, aiming to convey and practice democratic life values and skills.

The distinguishing feature of NFE is its supplemental role in an individual's lifetime learning journey, often offered to ensure equal education access. It caters to all ages, adopting non-linear progressions, shorter durations, and varying intensities, commonly delivered through short courses, workshops, or seminars. NFE may not result in formally recognized qualifications, encompassing programs for adult/youth literacy and out-of-school children education.

In essence, NFE combines primarily experience-based, less-structured learning with a lifelong learning focus. Beyond schools, NFE finds application in diverse contexts such as holiday centers, adult education, and accreditation of prior learning. Examples include scouts, free adult courses, job training, voluntary work, and Massive Online Open Courses (MOOCs).

Introduction

Education is fundamental to societal progress, with various forms contributing to individual development. This project explores formal, informal, and non-formal education, highlighting their unique characteristics and roles in shaping individuals and societies.





Formal Education

- Definition: Classroom-based, structured curricula delivered by qualified educators within educational institutions.
- Characteristics: Timetable-driven, syllabus-defined, leading to recognized certificates or degrees.
- Objective: Comprehensive understanding of academic, vocational, or trade skills.

Non-formal Education

- Definition: Organized, systematic learning outside formal systems, targeting specific groups or individuals with particular needs.
- Characteristics: Deliberate, flexible in curricula and schedule, often serving adult literacy, vocational training, or community-based courses.
- Objective: Practical skills and knowledge acquisition, empowerment in various life aspects.

Informal Education

- Definition: Lifelong, unstructured learning occurring spontaneously through daily experiences and interactions.
- Characteristics: Occurs at home, in communities, or through self-directed learning.
- Objective: Diverse skill acquisition and insight development, lacking formal structure and certificates.

Importance of Understanding

Understanding these education types is crucial for grasping the dynamic learning process in our world. Each serves unique purposes, catering to diverse learners with distinct needs and aspirations, shaping lifelong learners and informed citizens.

The Importance of Non-formal Education

Non-formal and informal education play vital roles in skill acquisition beyond traditional learning environments. They offer efficient skill development avenues, enhancing employability, access to further education, and social inclusion.

EU Initiatives

EU institutions are pivotal in enhancing non-formal and informal education. Recommendations like the 2012 validation recommendation aim to increase visibility and value of skills acquired outside formal education and training, fostering social inclusion and empowerment.



Bibliography

- Coombs, P. H., & Ahmed, M. (1974). Attacking Rural Poverty: How Nonformal Education Can Help.
- Schugurensky, D. (2000). The Forms of Informal Learning: Towards a Conceptualization of the Field.

Sitography

- EUROPASS: Validation of Non-formal and Informal Learning
- Passion in Education: Types of Education

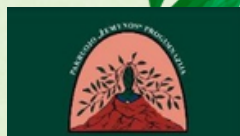
RESOURCES:

- <https://www.icye.org/wp-content/uploads/2017/06/NFE-Handbook-May-2017>
- <https://rm.coe.int/16807023d1>
- <https://www.salto-youth.net/tools/european-training-calendar/training/power-of-non-formal-education-ch-nfe-and-youth-exchanges.2446/>
- <https://epale.ec.europa.eu/it>
- <https://www.mooc.org/>

Topics and methodology developement :

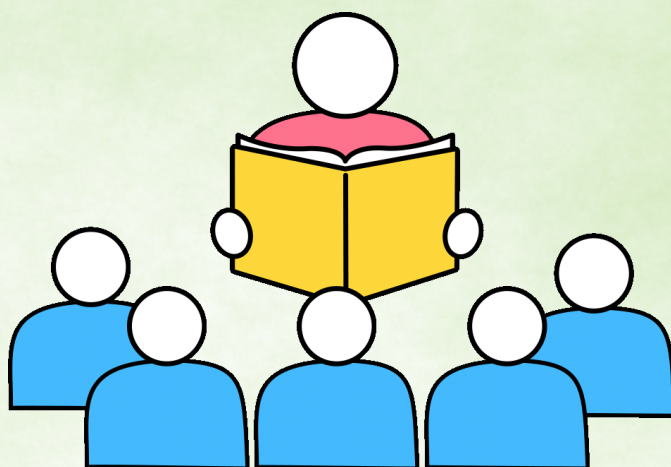
The purpose of this toolkit is to equip teachers with the necessary methodologies and knowledge to instill awareness of green building in their students. By positioning the school as a central player, this toolkit facilitates the elevation of awareness and the transformation of practices associated with environmental protection.

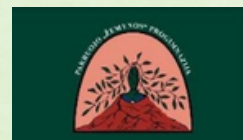




Audience and Applicability:

Primarily designed for teachers and youth workers, the toolkit is adaptable and can be utilized by any organization engaged in education and/or sustainable development.





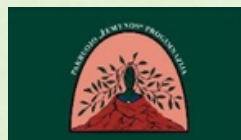
MODULE 1: ICE BREAKING AND TEAM BUILDING

Theoretical Part

Overview:

In today's ever-changing world, with the environment's safeguard at the forefront of global concerns, we recognize the urgency of introducing our children to the vital concept of environmental responsibility. This program aims to do so in a fun and engaging manner. The program has a multifaceted purpose. It seeks to introduce children to green practices, foster respect for both nature and their peers, promote positive group dynamics, and encourage meaningful discussions about environmental challenges. Anticipated outcomes encompass heightened environmental awareness, an appreciation of the significance of environmental protection, nurturing creativity and imagination, and empowering children to make meaningful contributions to a greener, more sustainable world. The subsequent sections detail the activities that will translate these objectives into actions. Through video viewings, self-introductions, creative expressions, and collaborative village projects, we aim to nurture a generation that not only comprehends environmental challenges but is also motivated and empowered to drive positive change. The seeds of environmental consciousness we plant today will continue to flourish in the future





Aim:

● **Introduction to the Topic of Good Environmental Practices:** The primary aim of this program is to provide a holistic and engaging introduction to the world of good environmental practices. By doing so, we seek to enable children to comprehend the importance of making environmentally conscious choices in their daily lives. This includes understanding the meaning of 'green practices' and why they matter.

● **Recognizing Mutual and Environmental Respect:** Through carefully curated activities, we aspire to foster a sense of respect that extends both to fellow participants and the environment we all share. This is a cornerstone for sustainable progress, emphasizing that working together harmoniously is essential to protect our planet.

● **Promoting Relationships Within the Group:** The power of collaborative relationships cannot be overstated. By engaging children in icebreaking activities, we aim to create an environment where they build strong and positive relationships with their peers. These relationships lay the groundwork for effective teamwork and the understanding that together they can drive change.

● **Creating a moment of discussion in relation to environmental Issues:** To address environmental challenges effectively, one must first analyze these issues. This initiative creates a space for children to have meaningful discussions about environmental concerns, which will empower them to seek solutions and drive positive change.

Expected Outcomes:

● **Enhanced Environmental Awareness:** By engaging in activities beyond traditional school or home settings, students will gain a deeper appreciation for environmental preservation. This enhanced awareness extends to recognizing the significance of small, everyday actions in shaping a sustainable future.

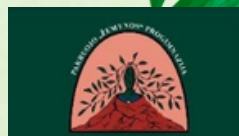
● **Recognizing the Significance of Environmental Issues:** The carefully selected videos will serve as powerful tools to highlight the relevance and urgency of environmental issues. Observing these issues through captivating animations will leave a lasting impact on children's minds, ensuring they recognize the importance of safeguarding our planet.



● **Nurturing Creativity and Imagination:** In drawing and designing greener homes and communities, children will unleash their creativity and imagination. They will learn that it is possible to transform their environment creatively, planting the seeds for a more sustainable and imaginative future.

● **Empowering Children to Make a Difference:** The program will empower children to understand that, despite their young age, they hold the power to make a meaningful impact. Through their creations, ideas, and newfound awareness, they will see that even small actions can be useful to obtain substantial results when joined with the efforts of others.





Practical Part

Description of Activities:

STEP 1. Let's start

Teachers start with a short explanation of the topic: environment good practices

This should include:

- What is meant by green practices and good environment practices (recycling, food waste avoidance, water saving, increase bicycle using, responsible consume...)
- Why talk about it today
- How you can work on the environment today to create a better one tomorrow (providing short examples about what a child can do in their daily activities)

It is important to be able to identify the information from the outset without getting lost in long speeches that would make children miss the point and the focus of the speech.

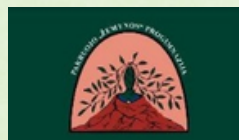
Time: 10 minutes

Materials: no materials are needed.

STEP 2. Let's break this ice activities

Teachers will show this video to the children:
<https://www.youtube.com/watch?v=mkjwxmcd0E>

First, teachers have to explain how to watch the video. Teachers must explain to children to focus on nature, and to notice what sticks in their minds the most, what they appreciated the most or what impressed them while they are watching the video. The video is in English. It doesn't matter if they don't know the language well, the important thing is to focus on nature.

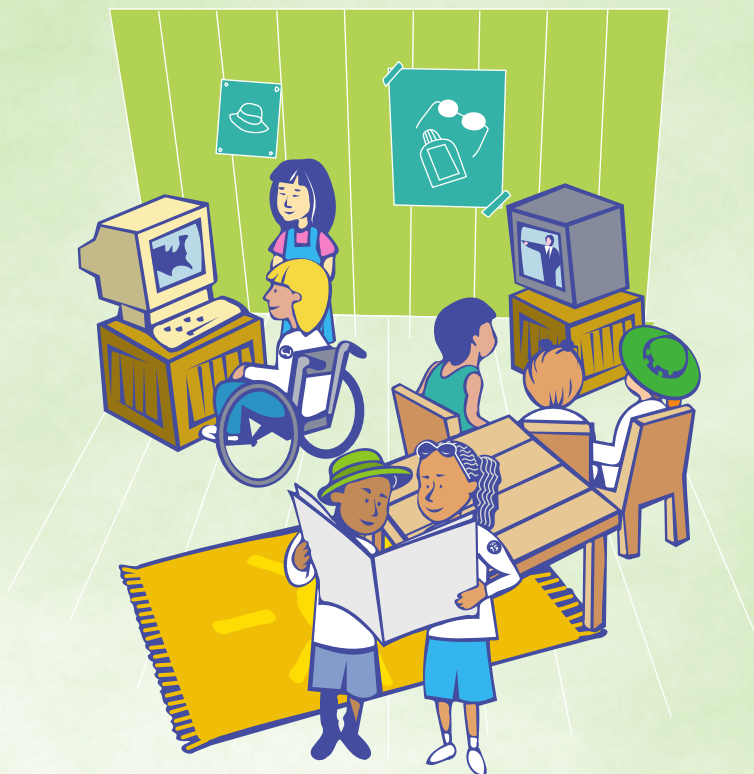


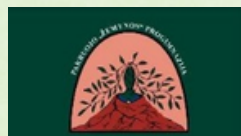
Video viewing: 2 minutes.

Then, after watching the video, teachers will pass to the real ice braking activity. Teacher and children will stand in a circle, with the teacher holding a ball. The teacher will then start by introducing themselves by saying their name and then the aspect of nature that they liked about the video. Immediately afterwards, the teacher will pass the ball to a child who will have to do the same. The teacher will have to continue the game until all the children have shown up.

Time: 2 minutes for the video, 15 minutes for the ice braking game. In total 17 minutes more or less.

Materials: a television to connect to a pc or tablet (the video is on YouTube) or a digital whiteboard (lim) and a ball available, preferably soft, for example foam for the game with children.





STEP 3. Transform your home in a green home!

Once the presentations are finished, the teacher has to remember to children to keep in mind the element of nature they liked most. After that, the teacher will deliver to each a sheet of paper (preferably made of recycled paper). Teacher will explain to children the next activity with this instruction:

“Every children have to draw their own house, modifying and transforming it by inserting as many green elements as possible e.g. garden with plants, moss roof, plants hanging on the outside walls, etc. Set your imagination free in this! Feel free to express and modify your home as green as possible. Get inspired by the video or by what you have seen in the past.”

Time: 30 minutes

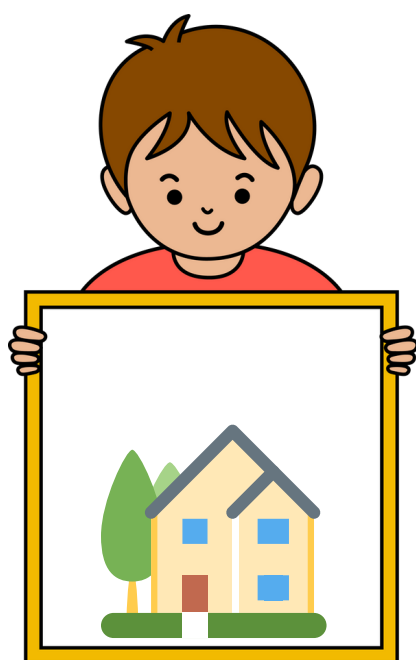
Materials: sheet of paper (preferably made of recycled paper) and colored pencils.



STEP 4. From a singular house to a green village!

Next, the children will be assigned to a group. The teacher will have to give each child a name (among trees, leaves and flowers). Once children's assignment has been completed, they will be divided into various groups according to the element of nature to which they have been assigned. So there will be three groups: the flowers, the trees and the leaves groups.

Teacher will assign a poster per group that will become the participants' village. Children have to place the house they designed inside the poster and all participants of the group will have to draw the streets and all the objects they consider useful for a green village. The means of transport should be what they can use (no cars but e.g. bicycles and rollers).



Then, each group have to present their village to the class.

Time: 30/45 minutes for drawing and 5 minutes per group to present their village to the class, so 15 minutes in total, so in the end, one hour for the whole activity.

Materials: poster paper and colored pencils.

STEP 5. Let's conclude..

At the end of all the previous steps, teacher will be shown to children these two films (4 and 3 minutes per video).

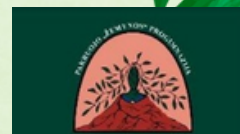
<https://www.youtube.com/watch?v=SatxIOBfNY>

<https://www.youtube.com/watch?v=P5OBWbZDZlc>

The first one is in English. Even if the children don't understand it, teachers have to explain to focus on images and ask them what they understood in each frame, stopping the video to allow a full comprehension. The teacher will help translating the most difficult parts.

Time: 7 minutes.

Materials: a television to connect to a pc or tablet (the video is on YouTube) or a digital whiteboard (lim).



Debriefing session

The debriefing part will be closely linked to the last ice-breaking activity, equivalent to watching the videos. The goal right now is to nail down all the concepts that have been developed throughout the games. This activity will be the initial one so we are giving an initial smattering of what will then be found during all the various parts of the workshop, but it is important right from the start to create a climate and a mind that is more careful towards nature. Teacher has to create a discussion focus on how the children found themselves within the group, focusing on how collaboration is fundamental in helping the planet, because also by making small gestures we can change.

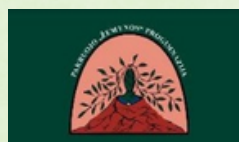
After that, teacher can focus on what the children saw during the video. Also, teacher have to help them recognize what they saw through simple questions which can be: What is Milo doing in the park? What did he found with his dad? And what did they decide to do?

The last moment will be a final reflection on what they did during the whole workshop, whether they had fun, what remained with them, etc. Discussion moderated by the teacher examples:

- Focus on what they can do
- Did they realise they can do something?
- How can an object or a house be transformed creatively?
- Can it be done?
- Can we do something for the environment?
- Can these be good ways to make the world cleaner, greener and to respect it too?

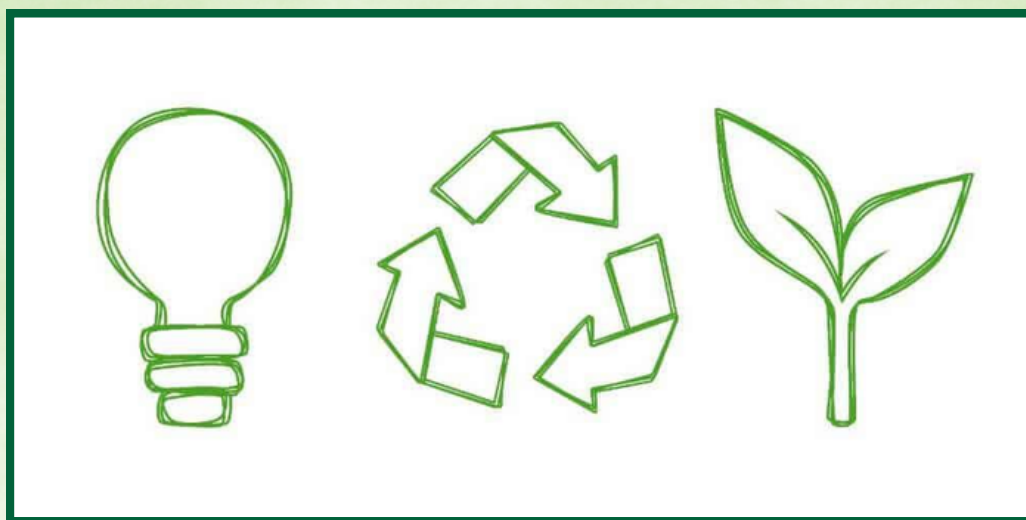
Time: 15/20 minutes.

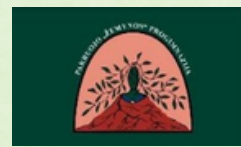
Materials: No materials are needed.



Further Reading:

- “Learn English kids” – The British Council – <https://learnenglishkids.britishcouncil.org/category/topics/environment> , a fun and interactive series of activities to foster green practices among children and ... learn English!
- Earthworks Group: 50 Simple Things Kids Can Do To Save The Earth (Turtleback School & Library Binding Edition), 1990
- Handbook for working with youth in the natural building field: <https://www.salto-youth.net/tools/toolbox/tool/handbook-for-working-with-youth-in-the-natural-building-field.4013/>
- Introducing Global Warming to Primary School Teachers: <https://www.salto-youth.net/tools/toolbox/tool/introducing-global-warming-to-primary-school-teachers.3989/>





MODULE 2: RECYCLING

Theoretical Part

Proper Waste Separation:

Separating our trash is really important because it has a big impact on the whole world. Because of growing population and economic development, waste management is one of the greatest concern of States. In our daily lives, recycling and waste separation can make the difference, contributing to two important things: First, it helps us get back valuable stuff from the trash, which means we don't need to use up more of our Earth's resources. Second, it stops us from making even more waste that would just fill up our landfills. By 2050, the EU Green Deal wants to stop all the harmful gases we put into the air. To do this, EU policies are exploiting circular economy ideas and ways to manage waste. This means using things again, not letting them go to waste, and using fewer resources. But it is not easy – we need to work together to make sure making stuff does not lead to making more trash. The EU set some goals for 2030, like reusing 60% of what's left in cities and only putting 10% in dumps. To reach these goals, the EU made a plan called the Action Plan on Circular Economy, a guideline to teach how to change our approach to waste. They want businesses to be more sustainable, and they are sharing good ideas among countries. EU countries have to reach a goal by 2025: at least 55% of the garbage we throw away needs to be recycled or used again. Cities also have a plan called the Green Cities Accord. It's part of the Action Plan and wants cities to handle their trash better and re-use materials. Right now, Europe makes a huge amount of waste – 2.5 billion tonnes each year- about 27% of this is from households. The EU wants to recycle 55% of all this by 2025, but we are at 49.6% now. They're serious about reducing waste, getting back valuable things, and not harming the environment. Even though there are new plans, there are already rules about

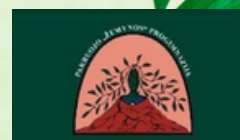




waste in the EU. They want to prevent waste first, then use things again, and finally recycle. This is important for saving important resources, cutting down on bad gases, and making sure we're in control. But, in 2023, they saw that many countries might not reach their goals for recycling. Some might miss the targets for recycling household waste. With the world making three times more things and using up double the resources by 2030, Europe has to think hard about how to keep things going in a way that's good for the Earth and education of new generation is one of the keys we have to change our societal behaviour, teaching children and youth, first of all, how to separate waste.

Challenges Faced by Students:

Unfortunately, our students often fall short in adequately sorting their waste. This deficiency may stem from either laziness or poor examples set by their families. Many limit their efforts to the bare essentials. It is imperative to convey to them the importance of dedicating a few seconds each day to proper waste sorting. Understanding the rationale behind this practice is crucial for fostering a sense of responsibility towards the environment. In fact, Waste management, achieved through segregation and recycling, is not something we can leave solely to garbage collection services or recycling centers. It starts at home and school, and our children need to grasp the importance of proper waste segregation early on. One effective way to teach children about this crucial topic is by incorporating play into their learning experience, initiating waste segregation and recycling education based on the three Rs highlighted by Greenpeace: Reduce, Reuse, and Recycle.

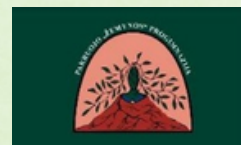


- **Reduce:** Guide your children to decrease the amount of waste they generate, whether it's plastic, paper, cardboard, CO2 emissions, or other materials or substances.
- **Reuse:** Our society often discards items without considering their potential for a second use. Encourage your children to find new purposes for items instead of disposing of them.
- **Recycle:** Instruct your children on recycling the waste that cannot be reduced or reused, teaching the difference among solid waste (plastic, paper, glass, organic and inorganic).

Reducing the Use of Plastic at School: The Example of Plastic Bottles



Plastic inundated our environment, particularly evident in the abundance of disposable plastic bottles strewn across beaches worldwide. Originating from fossil resources, plastic, a polymer chain, poses environmental challenges. Not only is its biodegradation time exceptionally long – spanning hundreds or thousands of years – but its disposal methods are also problematic. Burning plastic releases carcinogenic dioxin, while recycling proves difficult due to limited recyclable types and low percentages.



The Solution:

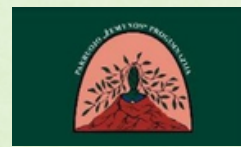
To address this issue, the solution lies in halting production and, subsequently, consumption by educating our students. A single bottle of water can make a significant impact.



Reducing the Use of Plastic at Schools: No Plastic for Our Snacks!

Considering the environmental impact of plastic, it's crucial to prompt students to reflect on the packaging of their snacks. Encouraging sustainable alternatives, such as fresh, unpackaged fruits, aligns with both ecological and health-conscious choices.





Let's Try Not to Waste Paper

Beyond energy, paper usage constitutes another area where waste reduction is achievable. Teachers can lead by example, adopting digital resources, minimizing photocopies, and requesting fewer assignments on paper. Educating students on the significance of trees, vital for oxygen production and carbon dioxide absorption, reinforces the importance of responsible paper use.



Preserving Trees and Recycling:

While the impracticality of planting a trillion trees is acknowledged, it is essential, at a minimum, to cease further deforestation. Instead of wastefully using paper for activities like crumpling into balls or crafting toy airplanes, emphasis should be placed on recycling paper differently before disposal, re-using it while taking notes or exploit classroom's used paper to foster children creativity with tailored laboratories. When choosing paper for classroom activities, it can be useful to but already recycled paper and suggest its purchasing to families too for children's notebooks. This way it is possible to create a waterfall impact preserving trees an fostering circular economy.

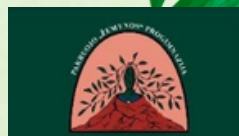




Aim:

- **Conservation of natural resources and ecosystems:** Kids will learn that through recycling is possible to preserve natural resources and ecosystems
- **Reducing the harmful impact on the climate:** Recycling reduces industrial production creating a decreasing in greenhouse gas emissions, mainly responsible for climate change.
- **Formation of skills for separate collection of waste:** improving kids knowledge and skills on waste segregation is vital to form responsible adults able to make the difference
- **Promote the recycling process and its benefits:** The activity will enhance among kids the value of recycling in a fun way
- **Promote separate gatherings by involving parents in the activities:** The activity will engage parents and families, offering a positive model of collaboration with their kids in the field of household waste management.





Expected Outcomes:

- **Formation of habits for separate waste collection among students and Reuse of raw materials (up-cycling):** kids will have learnt how to segregate solid waste and how to involve them in recycling activities.
- **Conservation of natural resources:** Once having learnt these skills, natural resources consumption pro capita will decrease.
- **Reduction in school waste volume:** Applying these activities to all classrooms will guarantee a decrease in school waste volumes and connected costs.
- **Involvement of a large number of parents in the separate waste collection process:** parents will have been involved in the activities, fostering their connection with children and developing new educational and leisure experiences to co-create with them.



Practical Part

First Activity: SEPARATE COLLECTION



Description of the activity

Waste recycling has garnered widespread interest, prompting individuals of all ages to become environmentally aware and take reduced action. The simplest step in this direction is to recycle waste in designated places. Recycling offers numerous benefits, primarily in environmental protection. Given the escalating threat of global warming and increasing extreme weather conditions, initiatives like recycling are crucial and easily accessible to all residents.

We have chosen the Recycling Module for primary school students aged 7 to 10, deeming it suitable for education in separate waste collection. This initiative involves the local community, including parents, neighbors, local NGOs, and the local government. Partners such as Gorata.bg and Eko pack, along with participation in the international initiative "Enter the Green Circle," amplify our efforts. The activities are organized by the school club for personal development, "Ecoclub."



Description: Students work in pairs for two class hours, recurring every third week of the month. In the first 20 minutes teachers will present the benefits of waste segregation through discussion, videos, and teacher practical demonstrations. Introduction to rules for separate collection of paper and cardboard waste, as well as plastic waste from packaging. A video suggested can be found here: <https://www.youtube.com/watch?v=7cubLLZ0BH0> (teachers will support the comprehension of the video by translating it if required). Next 30 minutes: Educational game with a competitive nature, involving waste collection within designated areas. The groups (equipped with sacks and gloves) will have a sort of general solid materials to put in the correct bins provided by the teacher with proper labels. The group that segregate the greatest amount of waste (correctly) in the less amount of time, wins. Every mistake is a -1 in the final score. Every correct segregation a +1. The winning group receives a plant for the school yard. The last 30 minutes includes debriefing and awarding to the winning group.

Time: 75 minutes

Materials: Containers, buckets, sacks, gloves, tools, shovels, bins.

Working Groups: Teachers, school staff, students and parents, neighbors, local NGOs, local government.





Debriefing Session

The discussion will be based on:

Advantages of Separate Waste Collection: Explore the benefits of separating waste. Discuss environmental, economic, and social advantages.

How to Collect Waste Separately: Share insights on effective methods for separate waste collection. Discuss practical tips and techniques.

Implementation of Separate Collection Outside School: Explore experiences with implementing separate waste collection practices beyond school premises. Discuss challenges and successes.

Sharing the Idea with Loved Ones: Discuss strategies for sharing the concept of separate waste collection with family and friends. Explore ways to encourage adoption.

Satisfaction from the Activity: Reflect on personal satisfaction derived from participating in separate waste collection activities. Share feelings and motivations.

Involvement of Volunteers: Explore the potential for involving volunteers in such activities. Discuss strategies for recruitment and engagement.

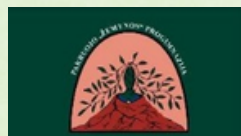


Second Activity: CARNIVAL



Description of the activity

Students will cultivate the habit of collecting recyclable materials at home to create costumes, fostering knowledge of recyclable items and their creative reuse. The activity aims to engage students in enjoyable events, enriching their understanding of recyclable materials and promoting habits that support environmental protection. The activity will also foster their creativity and aesthetic sensitivity. The Recycling Module is chosen for primary school-aged students (7 to 10 years old) to educate them on separate waste collection and re-use the material in a creative way, creating costumes, avoiding buying new ones and decreasing waste volume. The initiative extends involvement to the local community, including parents and local government.



Description: The activity will be developed in two time frames: One Week Before "Day of Earth" and during the "Earth day". Before the festival, A one-class-hour-meeting will be developed to regulate conditions for participation in the carnival and distribute materials to promote recycling. After the meeting, teachers will ask students and parents to choose materials at home for a costume. Children have to collect recyclable materials (paper, metal, plastic, textiles) and, with the help of parents (at home) and teachers (at school), make costumes during the week. At the earth day, children will arrive at class with their costumes, celebrating the day together with teachers which will evaluates based on criteria like originality, diversity in materials, and complexity of techniques, gather satisfaction feedback using emoticons made from recycled materials.

Time: 1 week

Required Materials: Paper, plastics, textiles, metals

Working Groups: Teachers, school staff, students, parents, local government

Debriefing Session

The debriefing session will be dedicated to the telling of students about this experience: How was working with your parents? Did you enjoy it? Are one of the questions that should be asked. Teachers will ask everyone how they did their costumes exactly. Children have to explain the materials they used, what were they before and what are they now.





Third Activity: ECOCLUB

Description of the activity

The activity is tailored to train students who are Ecoclub members to manage the entire process. The activity will take place throughout the school year with key events at the beginning and end. The objective of the activity is to teach members about specific paper recycling techniques. Teachers will engage students in making cover for small wish books from recycled paper with them. Each child will write wishes or thank-you notes for classmates in the scrapbook. Books will be kept accessible, allowing students to contribute throughout the year.

Time: Through the year

Required Materials: Recycled paper, crafting tools, writing materials

Working Groups: Ecoclub members, teachers, students



Debriefing Session

The debriefing will be based on gathering feedback from students about their experience with the scrapbook activity and assessing the success of the project in terms of engagement and achieved outcomes.



Fourth Activity: BOTTLE MESSAGES

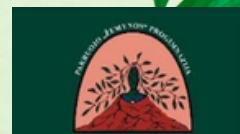
Description of the Activity:

In the framework of a two-hour class activity, students are encouraged to participate in an initiative that combines creative expression with environmental awareness. The activity begins with students bringing small plastic bottles from home, prompting a discussion on the importance of reusing materials. In the subsequent "Decorating the Bottles" session, students will have the opportunity to express their individuality by adorning their bottles with recyclable materials of their choice. This transforms ordinary bottles into personalized artifacts, fostering a sense of creative engagement. The decorated bottles will be then affixed onto pallets strategically placed within the school corridor. This step serves a dual purpose – creating a visually interesting display and establishing accessible postal plastic bottle collection points. The intention is to instill a shared sense of responsibility within the school community regarding sustainable practices without extending beyond the confines of a two-hour class. To ensure sustained engagement within the limited timeframe, the activity includes a monthly rotation of bottles. This introduces variety and freshness into the display regularly. The evolving collection visually represents the ongoing commitment of students to the principles of reduce, reuse, and recycle during the class session. As a culmination of the activity, students open their postal plastic bottles on their birthdays, discovering personalized messages and warm wishes made from their peers. This aspect of the activity goes beyond its initial environmental focus, fostering connections and creating positive memories within the class community.

Time: 2 hours

Required Materials: Small plastic bottles, pallet, decorating materials (paper, textiles)

Working Groups: Teachers, school staff, students



Debriefing Session

The debriefing session will assess students' willingness to participate in the postal plastic bottle activity and will pivot a Discuss potential occasions for making such bottles at home or in school.



Fifth Activity: RECYCLED CHRISTMAS

Description of the Activity:

Students will be involved in a structured process that encourages the mindful gathering and utilization of diverse materials to create classroom Christmas decorations made on waste materials. At the beginning, students will be directed by teachers to collect and assort materials, including plastic, paper, glass, metal, light bulbs, textiles, as well as natural resources such as leaves, cones, acorns, and walnuts, at home or at school. To infuse an environmentally conscious element, the reuse of existing Christmas toys and candles is advocated, promoting sustainability through the repurposing of familiar items. After this collection phase, the decoration activity will start, designed to underscore creativity. Students, under the guidance of teachers, will craft unique Christmas decorations employing the collected materials.



Each creation stands as a testament to the individual artistic expression and inventive capabilities of the participants. The educational aspect of the activity will be the promotion of upcycling and waste reduction. This theme is accentuated, emphasizing the objective of creatively repurposing materials. At the end decorations will be used to create warm and inviting classroom setting. The resulting decorations serve as visual cues, symbolizing the incorporation of sustainable choices into the festive season. Students engage in the process of creation while concurrently developing a heightened appreciation for the significance of sustainable practices, particularly during festive occasions.

Time: 2 months

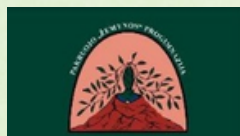
Required Materials: Various materials - plastic, paper, glass, metal, light bulbs, textiles, natural resources; old Christmas toys and candles.

Working Groups: Teachers, school staff, students.

Debriefing Session

Through teachers' questions the students' enthusiasm for making Christmas decorations will be evaluated besides encouraging the discussion about where similar eco-friendly practices could be implemented at home or in school.





Further Reading:

- S. Tornio: This Class Can Save the Planet, 2021
- M. Nhin: Earth Ninja: A Children's Book About Recycling, Reducing, and Reusing, 2020
- J. French: What a Waste: Trash, Recycling, and Protecting our Planet (Protect the Planet), 2019
- E-booklet "Green skills" - <https://www.salto-youth.net/tools/toolbox/tool/e-booklet-green-skills.3615/>
- Seventh Generation, How Kids' Costumes from Recycled Materials
- Pinterest, <https://www.pinterest.it/pin/diy-costumes-recycled-and-reused-486388828498163634/>
- DK, Recycle and Remake: Creative Projects for Eco Kids, 2020



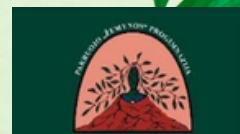


MODULE 3: BUILDING ENERGY EFFICIENCY

Theoretical Part

Watch Out for Waste: Turn Off Lights, Screens, etc. at home and at school.

Efficient energy use remains critical while the EU transitions to sustainable sources. Until this transformation concludes, a conscious approach to electricity consumption is vital. Teachers play a pivotal role as examples. Do we leave interactive whiteboard screens or PCs on unnecessarily? Are lights kept on during sunny days? Setting a good example establishes habits, and using energy responsibly can even open opportunities for outdoor lessons. Moreover, these attentions can be implemented also in the school ecosystem, making it greener and more self-sufficient under the energy point of view. In fact, adopting energy-efficient practices in educational institutions is a pressing need, demanding a comprehensive approach to unlock their potential. The exploration of energy efficiency in these facilities underscores its significance beyond cost savings. This holistic perspective encompasses the advantages of redirecting saved costs towards educational enhancements, infrastructure improvements, and technological advancements. Moreover, embracing energy-efficient measures aligns with sustainability goals, actively contributing to climate change mitigation and the conservation of natural resources. Energy-efficient facilities ensure optimal lighting, temperature control, and indoor air



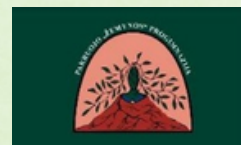
quality, fostering increased productivity and enhanced academic performance. This positive influence extends to the broader community, as educational institutions actively engage in energy efficiency initiatives, transforming students into environmentally responsible citizens.



Key Strategies to Unlock Energy Efficiency

Teachers should take into consideration the following steps both to start to re-think school environment, suggesting improvements, and to teach students the benefits of implementing following strategies in a fun way:

1. **Conducting Energy Audits:** Initiating with a comprehensive energy audit is paramount. This involves scrutinizing consumption patterns, identifying inefficiencies, and formulating strategies for improvement.
2. **Implementing Energy-Efficient Lighting:** Initiating a transition to energy-saving LED lights and incorporating motion sensors and automated controls to curtail unnecessary energy consumption.
3. **Optimizing HVAC Systems:** Prioritizing the optimization of Heating, Ventilation, and Air Conditioning (HVAC) systems through routine maintenance, air filter replacements, and the adoption of energy-efficient models.



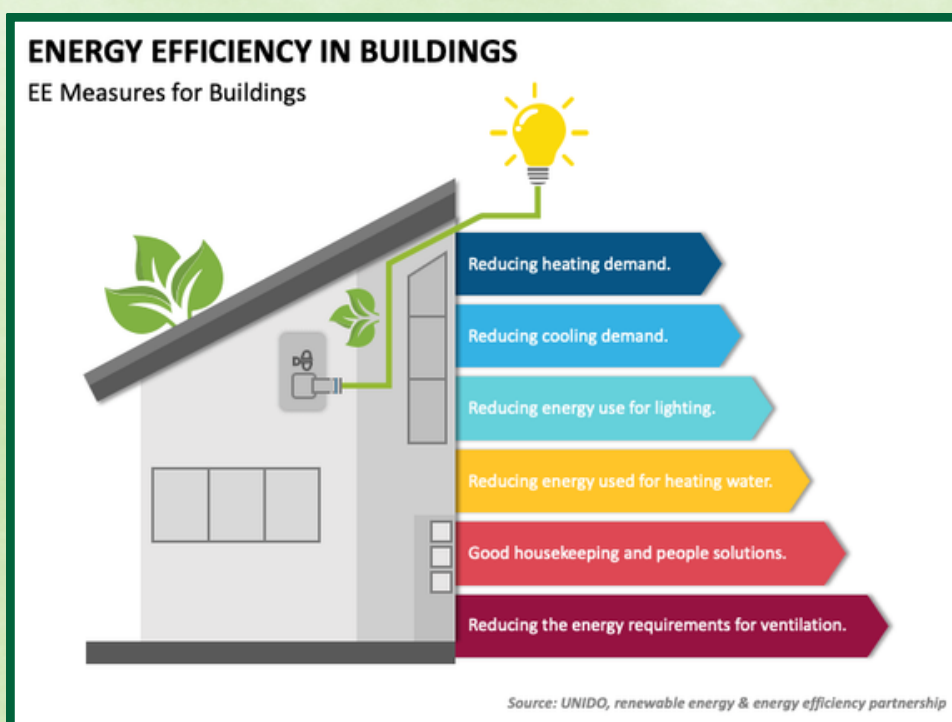
4. **Embracing Renewable Energy Sources:**

Integrating renewable energy systems, such as solar panels or wind turbines, to generate clean energy and reduce reliance on conventional fossil fuels.

5. Raising Awareness and Education: Actively propagating awareness through targeted campaigns, workshops, and educational programs to foster a cultural shift towards energy conservation among students and children.

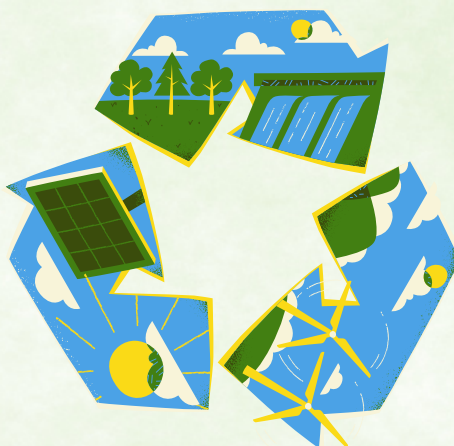
In tandem with this, retrofitting educational institutions for energy efficiency emerges as a transformative initiative, as evidenced by a case study in the UAE. The study's comprehensive analysis includes an examination of annual electrical consumption, an awareness survey gauging the current state of energy consciousness, and a meticulous energy audit. Identified measures include the installation of motion sensors, integration of optimization software with HVAC systems, and targeted improvements in building insulation. Projections indicate substantial annual savings, underscoring the efficacy of retrofitting as a potent tool for achieving energy efficiency. In conclusion, a cohesive strategy embracing energy efficiency in educational institutions emerges as a pivotal initiative, yielding multifaceted benefits. This amalgamation of awareness and practical strategies delineates a path towards substantial energy savings, environmental stewardship, and the creation of optimal learning environments. The collaborative efforts of educational institutions, students, and industry professionals are indispensable in charting a course towards a sustainable and energy-efficient future.





Aim:

- **Foster a civic attitude to protect the living environment:** Improve students carefulness to the home and school environments, understanding the concept of energy and consumables consume and saving
- **Develop practical skills for both students and teachers:** Improve the skills of students in saving energy and resources in their everyday life and teachers skills in planning a greener school environment and in teaching sustainability to students
- **Raise awareness among students, parents, and the local community about the benefits of responsible resource use:** Inform about the resource saving possibilities, methodologies and positive impact for the environment
- **Improve the green energy resources understanding:** Form children with simple knowledge of alternative sources of energy, why they are needed and their positive impact.



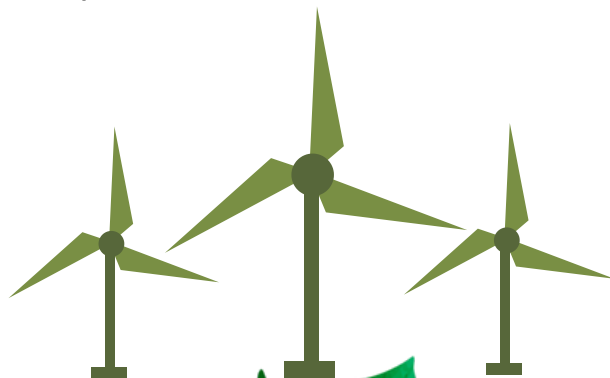


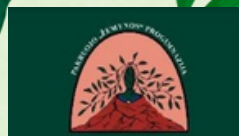
Expected Outcomes:

- Reduction of resource consumption (electricity, water, food, etc.) at home and at school: decrease in energy waste by children at school and at home and improvements in schools energy management.
- Effective organization of personal space at home: promoting cleanliness, increased natural light, aesthetic improvements, cleaner air, and proper waste segregation

Further Readings:

- Brychkov, D., Goggins, G., Doherty, E. et al A systemic framework of energy efficiency in schools: experiences from six European countries (2023) <https://link.springer.com/article/10.1007/s12053-023-10099-4>
- S. Plesser, Indoor Environment and Energy Efficiency in Educational Buildings <https://www.rehva.eu/hvac-guidebook-repository/rehva-guidebook-29>
- T. Ashrafian, Enhancing school buildings energy efficiency under climate change: A comprehensive analysis of energy, cost, and comfort factors, 2023
- L. Cole, Green building literacy: a framework for advancing green building education, 2019
- Sustainable house projects for kids: <https://www.youtube.com/watch?v=iCH8XVQBabw>
- Teaching children about sustainability through the Green Roof <https://www.youtube.com/watch?v=ltNalbOvEoA>





Practical Part

Activity 1: Watch out for waste - Turn off lights, screens, etc.

Overview:

The encouraging news is the increasing production of energy in the EU from sustainable sources. However, until this transition concludes, which could span decades, it remains crucial to be extremely mindful of electricity consumption. Teachers play a pivotal role in instilling good habits in students, setting an example by being conscious of energy usage. This initiative opens up opportunities, such as conducting lessons in the garden.

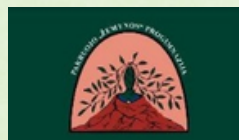
Aim:

Adopting a civic attitude to protect the house in which they live;
The development of practical skills for students and teachers;
Raising awareness among students, parents and the local community about the benefits of responsible use of resources

Expected Outcomes:

Reduction of resource consumption (electricity, water, food, etc.) at home;
Effective organisation of their own space at home (cleanliness, more natural light, aesthetics of the house, cleaner air, arrangement of containers for the selective collection of waste);
Placement and use of environmental education stickers.

Target Group: 6th-8th grade students



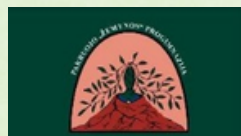
Description of the Activities

The teacher introduces the activity, outlining objectives, means, expected results, and structure. The activity unfolds in three key moments: the initial moment, preliminary discussions, and the development of a Bingo game on ecological themes; the second involves selecting activities for application at home, and the third encompasses carrying out practical activities at home.

1. Preliminary Discussions (Bingo Game on Ecological Themes)

- Each student receives a Bingo table with 12 boxes, each containing a household or ecological activity.
- Students fill in the box with the name of the colleague who performed the specified activity.
- Prizes for completing a horizontal line and declaring Bingo, with veracity checks by the teacher (pictures, videos, certificates of participation).
- Prizes include flower pots, sets of green light bulbs, and sets of green stickers.
- The Bingo winner receives an ornamental shrub.

This structured approach ensures active participation, learning, and a tangible impact on resource conservation at home.



2. Presentation of the Activity

The teacher initiates the activity by presenting a series of self-management (household) activities for students to complete. Through discussions, students are encouraged to propose new ideas. The teacher guides the analysis of the proposed activities, inviting students to suggest additional ones. Emphasis is placed on each student carrying out at least one ecological household activity at home and presenting it to the class group, using visual aids like pictures or films.

3. Practical Activities

Each student is tasked with initiating an improvement activity at home, such as planting trees and flowers, reducing water or energy consumption, or implementing selective waste collection.

Debriefing Session

All pictures and videos submitted by the students are collectively viewed and analyzed. A reflection/evaluation questionnaire regarding the activities is shared with the student group (refer to annex 2). During this session, students are encouraged to express their opinions and provide suggestions for improvement. This structured approach ensures a comprehensive review and constructive feedback on the implemented activities.



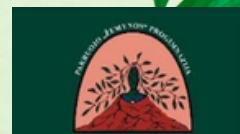


Further Reading:

Annex 1: BINGO – Green activities

I planted a tree	I have a flower pot in my room	I collect selectively	I reuse objects
I use ecological washing items	I have ecological stickers	I have an ecological light bulb in my room	I participated in Earth Hour
I walk to school	I am an ecologist volunteer	I keep it clean	I consume as much as I need



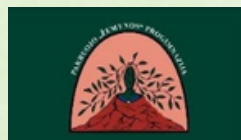


Annex 2: Questionnaire

Note: This questionnaire is for educational purposes only. The information, opinions, and views you provide will not be used for any other purpose and will remain confidential.

Name and Grade:

- What activity did you choose and why?
- Describe the activity carried out in three sentences.
- Mention at least two benefits of the chosen activity.
- What has this activity changed in your behavior?
- Specify a change generated by the chosen activity in the functionality of your home.
- What was the contribution of your work in your daily life?
- Has your work inspired others? How?
- Can such activities become a way of life? Justify your answer.
- Have you considered doing such activities in the future?



Activity 2: Green Geometry

Overview:

The energy efficiency of buildings, coupled with the reduction of energy requirements, represents two crucial objectives of sustainable development: the conservation of primary resources and the reduction of polluting emissions in the environment.

The central question is whether the geometric shape of buildings influences their energy efficiency. To illustrate this influence, students will study the volume and lateral surface of various geometric bodies sharing the same base surface and height. Higher volume and lateral surface result in increased heating costs, leading to reduced energy efficiency. This activity aims not only to convey informative content but also to cultivate reasoning, logical thinking, and creative adaptation to societal needs through practical exercises related to life.

Aim:

Developing mathematical and practical skills while fostering an awareness of the significance of energy-efficient buildings.

Expected Outcomes:

Tangible results: Models created by students.

Intangible results: Development of mathematical and practical skills, awareness of the importance of conserving primary resources, and reducing pollution through the construction of more energy-efficient buildings.





In addition to mathematical skills, children will develop attitudes of research, exploration, and understanding the relationship between humans and the environment. This activity aims to make them conscious of nature preservation and the role of energy-efficient buildings in mitigating pollution.

Description of the Activities:

The teacher introduces the students to the activity's topic, objectives, expected results, and the planned activities, organized into theoretical and practical parts. The target group for these activities is secondary school students (8th grade).

Proposed Activities:

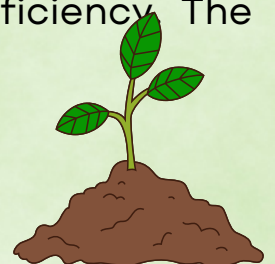
Activity One: Students form pairs and calculate the volume and lateral area for various geometric bodies (cube, triangular prism, pyramid, cone, hemisphere, cylinder) with a base of 12 square meters and a height of 2.5 meters. They then compare the data found.

Activity Two: Students create presentations (PPT, Prezi, Canva, film, etc.) showcasing interesting buildings with the studied shapes. Each team presents a geometric shape and its impact on the energy efficiency of a building. Based on their data, students construct a model of what they consider the most energy-efficient building.

Activity Three: Groups tour the gallery, studying and comparing models made by other groups. This involves office research on the volume of some buildings and their geometric shapes in relation to energy efficiency. The culmination is a model competition to

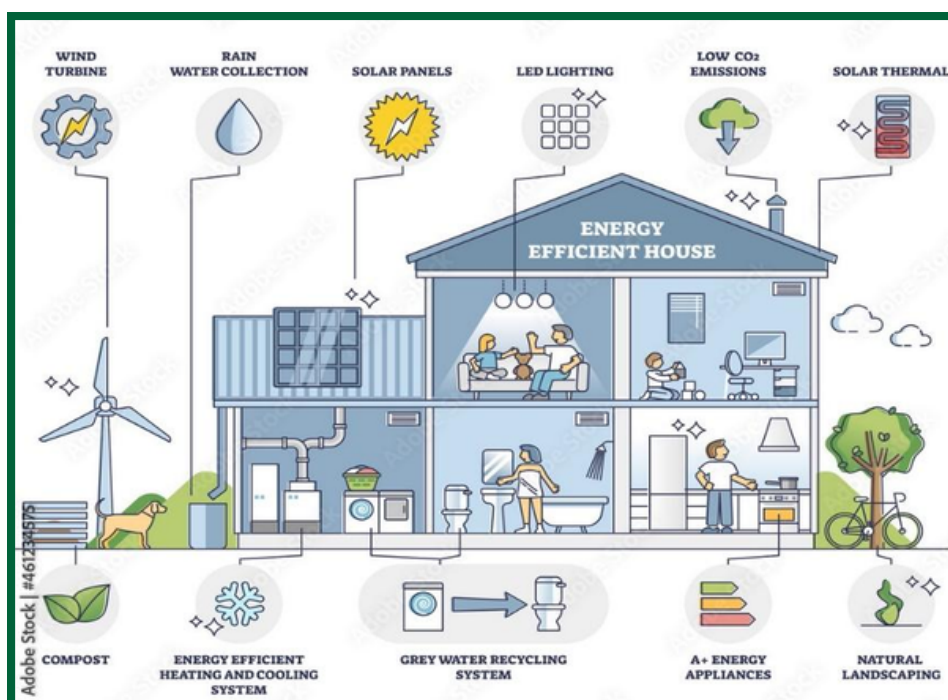
Debriefing Session

- Evaluate the models and award the most successful ones.
 - Conduct a reflection survey gathering opinions and recommendations.
- The teacher will use a rating scale from 1 to 5 (1. not at all, 2. a little, 3. medium, 4. a lot, 5. very much).
- How much did you like the proposed activity?
 - Does your home have elements that fit into the models presented?
 - Did the research work support the practical activity?
 - Do you think that the shape of the house influences the energy efficiency of the building?
 - Would you opt for such a home in the future?



Further Reading:

- Basic Categories of Energy-Efficient Houses
- Use Form Factor to Reduce Energy Consumption of Buildings

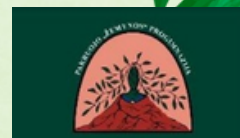


Activity 3: My Class is the (Eco)Best

Contest - Classroom Design

Overview:

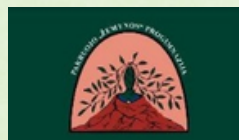
The classroom is a significant space where students spend a considerable part of their lives, playing a crucial role in their learning activities. The classroom's structure and design depend on various factors, including natural elements (brightness, daily temperature, air quality), technical aspects (construction material, room shape, wall height, volume), and personal factors (students' freedom to personalize and organize the space).



Specialized studies indicate that natural factors can contribute up to 16% to increased student performance, emphasizing the importance of comfort within the classroom. Involving students in creating this comfort yields surprising results. This contest targets those who appreciate aesthetics, functionality, and sustainability, aiming for an efficient and sustainable learning environment.

Aim:

The primary goal of this mini-project is to promote awareness of the rational use of classroom resources, emphasizing the creation of a positive, sustainable energy in the learning environment. Additional objectives include fostering creative thinking, a competitive spirit, and promoting a constructive attitude towards arranging the classroom/workspace.



Expected Results:

The mini-project aims to train practical skills in ecology and spatial planning, while participants gain an understanding of the importance of creating an attractive and energy-efficient workspace.

Description of Activity

Target Group: The contest caters to primary (3rd and 4th grade) and secondary (5th and 6th grade) students.

Preparatory Stage:

- Publication of the call for participation, collaboration agreements, and competition rules

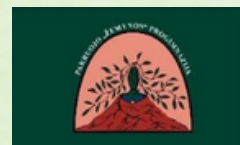
Implementation Stage:

- Preparation of competitors, classroom arrangement, and competition execution
- Necessary materials: Each team uses materials according to their needs (ecological light bulbs, sensor switches, etc.).

Evaluation/Prize Stage:

- Jury evaluation of classrooms based on established criteria
- Winners announced





Debriefing Session

After the competition, all participants will complete an online evaluation survey. The implementation team will hold a review meeting to discuss successes, challenges, competition levels, goal achievement, and future considerations.



Further Reading:

Sustainable School Buildings: A guide for making school buildings more environmentally friendly - Knepp C., 2020
Sustainable School Design in the Spotlight: 5 Principles - Long E., 2021
6 Surprising Sustainable Classroom Design Tips - xxx, 2022



Annex 1: Contest Rules

General Presentation

Article 1: The present contest is a component of the Erasmus+ project "Green Management in Schools for Sustainability (GIFs)," no. 2022-1-RO01-KA220-SCH-000088088, and is part of the local activities for the implementation of the Toolkit carried out within WP3 of the mentioned project.

Article 2: This competition is exclusively for schools.

Goal and Objectives

Article 3: The main purpose of this contest is to raise awareness of the rational use of classroom resources and the need to create a positive, sustainable energy in the learning environment. Additional objectives include:

- The development of creative thinking and a competitive spirit.
- Promoting a constructive attitude towards arranging the classroom/workspace.

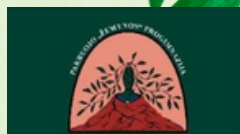
Expected Results

Article 4: The following results are expected through this competition:

- Training of practical skills in the field of ecology and spatial planning.
- Awareness of the importance of creating an attractive and energy-efficient workspace.

Target Group:

Article 5: The contest is addressed to primary school (3rd and 4th grade) and secondary school (5th and 6th grade) students. The secondary target group consists of primary and secondary school teachers.



Conducting the Contest

Article 6: The competition has the following stages:

- Preparatory Stage: Publication of the call for participation, signing collaboration agreements, and publication/transmission of the rules and content of the contest. Period: December 11-17, 2023.
- Implementation Stage: Preparation of competitors, arranging classrooms to improve energy and aesthetics, and all activities leading to the desired results. Examples of activities include replacing classic light bulbs with ecological ones, making cushions for windows or doors, placing flower pots, capitalizing on natural light, displaying ecological messages in the field of green buildings, etc. Period: December 18, 2023 – January 19, 2024.
- Evaluation/Prize Stage: The jury will evaluate the classrooms based on criteria such as energy efficiency, aesthetics, and the educational-ecological role of elements/materials. Period: January 22-23, 2024; awarding of winners: January 26, 2024 (CORRECT room of CNSH Tecuci).

Article 7: Necessary materials include ecological light bulbs, sensor switches, flower pots, window cushions, selective waste collection bins. Each team provides the necessary materials through self-financing.

Dissemination

Article 8: All results of this contest will be promoted/disseminated on the media channels of the GIFs project (<https://www.gif-erasmus.com/> and <https://www.facebook.com/profile.php?id=100087751017015>) and the media channels of the participating schools. If photos of participating students and teachers are used, a data transmission agreement will be signed at the beginning.

Final Dispositions

Article 9: This contest is held between December 18, 2023, and January 19, 2024. Exceeding the mentioned deadline in these regulations is not accepted.



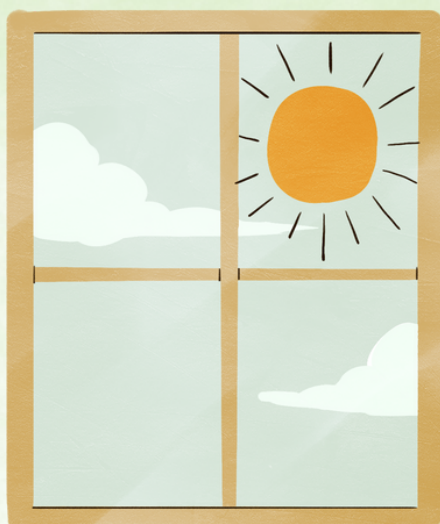
Activity 4: Window Cushions

Overview:

The environment in which educational activities occur is a shared priority for both students and teachers. With various factors competing for a favorable environment, understanding the importance of the law of conservation of energy becomes crucial, not just from a natural standpoint but also for the well-being of students.



This activity is directed towards individuals who empathize with creating an optimal, pleasant framework conducive to the efficiency and sustainability of the workspace. Choosing renewable energy sources, such as creating window cushions from recyclable materials, enables students to support clean energy development, reducing the environmental impact associated with conventional energy generation and enhancing energy independence. Let's optimize energy consumption, think globally, and act locally—small actions can contribute to global initiatives.



Aim:

- Raise awareness of the rational use of recyclable material resources to create a positive learning environment.
- Develop critical and aesthetic thinking.
- Promote a positive attitude towards recycling and reusing material resources.
- Expected Results
- Formation of practical skills and abilities in the field of ecology, ensuring a comfortable space.
- Strengthening interpersonal communication skills and a collaborative spirit.



Description of Activity:

Students are informed of the importance of their involvement in activities that ensure a pleasant and efficient climate. Using recyclable textile materials, they create window cushions for classrooms, providing effective thermal insulation. Alternatively, they can donate these handmade items to families in need.



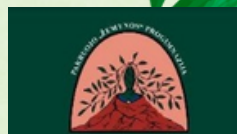
Materials Needed:

- Thread, needle
- Cotton wool or polyester fiber from recycled pillows
- Fabric sewn in the form of cylinders
- Various ornaments

Students learn about conserving energy, emphasizing the significance of sealed windows for energy efficiency. Although double-glazed windows are modern and efficient, cold currents can be created in constructions with wooden frames, reducing energy efficiency. Window cushions address this issue by maintaining a warm environment and reducing cold drafts. As the school has double-glazed windows, the cushions made are donated to those in need.

Students insert filling materials, sew the opening, and decorate the pillows, which are then collected and donated.





Debriefing Session

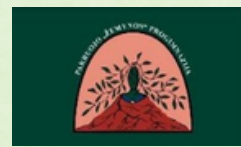
Say/write two things you learned/discovered/felt about yourself during the activity.

In your daily life, how do you use/where have you seen what you learned today being used?

Further Reading

- Hamakareen, 2021: Energy Efficiency in Buildings and its Importance
- xxx 2019: How to Build a Window Seat Cushion



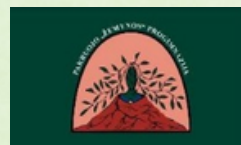


Activity 5: The Green Wall

Overview:

The presence of plants in work or living spaces is crucial for well-being, creativity, and health, as they transform carbon dioxide into oxygen. Daily exposure to oxygen, enhanced well-being, and positive energy are just a few benefits that flowers and plants bring to everyday life. Certain "purifying" plants can be introduced to homes and offices, cleansing and revitalizing the air, reducing the risk of various diseases. NASA studies indicate that indoor plants can eliminate up to 87% of air toxins, filter pollutants and carbon dioxide, release oxygen, and regulate humidity, thereby improving air quality. Specialists recommend one plant for every 8 square meters. Indoor flowers also diminish unhealthy pollutants, such as bacteria and fungi, aiding in the fight against respiratory and allergic conditions. (Text source: mobiera.ro)





Last but not least, the aesthetic aspect of interior design should not be overlooked. Plants relax the eyes, reduce stress, and contribute to a friendly and pleasant atmosphere. For students involved and others, the environment for educational activities significantly influences didactic efficiency and fosters a desire to create more green spaces both inside and outside the school.

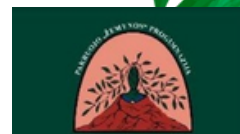
Aim:

- Raise awareness of the importance of plants in creating a healthy and pleasant living environment.
- Develop aesthetic sensibility and responsibility.

Expected Results:

- Creation of a green wall using live plants.
- Development of artistic-creative and ecological skills among students and educators.





Necessary Materials:

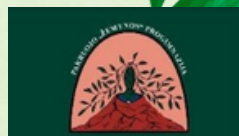
- Metal support for the green wall
- Wall attachment system
- 50 flower pots
- 50 decorative pots
- Carts
- Attachment system for pots to the metal support
- Flower soil

Target Group: 12-13 year old students (applicable to all age groups from 7 to 19 years)



Description of the Activity

Students will decorate pots in a cheerful and personalized manner using cards with positive messages. They will then transfer the plants to the new pots, filling them with soil. The pots will be arranged in the shape of the school's initials, CNSH, on the wall. Students will care for the flowers throughout the school year, regularly watering, fertilizing, and protecting them.



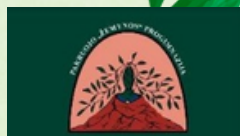
Debriefing Session

- Say/write two things you learned/discovered/felt new during the activity.
- In your daily life, how do you use/where have you seen what you learned today used?



Further Reading:

- Pinterest - Living Green Wall
- Naava - What Are Green Walls



MODULE 4: FOOD AND CONSUMABLE EDUCATION

Theoretical Part

Waste in the Canteen: Not Eating That? Take It Away

Food waste is a substantial issue, with an estimated one-third of produced food ending up in the trash. Beyond the moral dimension, this practice poses environmental challenges. In a world facing ecological overshoot, where deforested land primarily supports agriculture and livestock farming, preventing food waste is an urgent mandate. Encouraging students to bring reusable containers for leftovers not only minimizes waste but also instills responsible habits.



Exchange Corner

Our society often prioritizes price over necessity, leading to unnecessary purchases and resource exploitation. The real cost, however, transcends the price tag. For instance, a seemingly affordable 5-euro t-shirt may conceal a production cost of 24,000 liters of water, energy resources, textile fibers, and often exploited labor. Promoting awareness of these hidden costs can reshape consumption habits and foster a more sustainable mindset.



Practical part

Activity 1: Hydroponic Farming in Turkey

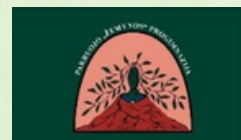
Overview:

In our pursuit of a more sustainable Earth, preserving water resources becomes paramount. Hydroponic farming serves as a fundamental technique in achieving this goal. By teaching hydroponics in our school, we equip our students with the knowledge and skills to reuse water efficiently, contributing to environmental conservation. This method emerges as a sustainable solution, saving time and energy.



Narrative Explanation:

The relevance of hydroponic farming for our students within the project lies in its ability to cultivate crops with less space and water compared to traditional soil farming. Through a closed system, water can be reused, minimizing both water and fertilizer usage and preventing environmental pollution. Additionally, hydroponic farming facilitates energy and labor savings.



Aim:

- **Space and Water Efficiency:** Requires less space and water compared to traditional soil farming.
- **Water Reuse:** Enables water reuse through a closed system.
- **Environmental Preservation:** Reduces water and fertilizer usage, preventing environmental pollution.
- **Resource Savings:** Achieves energy and labor savings.



Expected Outcomes:

- **Reduced Water Consumption:** Promotes responsible water usage.
- **Less Land Use:** Utilizes land more efficiently.
- **Profitability:** Yields approximately 50 times more profit per unit area than traditional agricultural models.
- **Vertical Farming Advantages:** Allows better land utilization through vertical farming.

Description of Activities:

- Hydroponic agriculture, the first technique of soilless farming, involves cultivation in an aquatic environment.
- Separation of oxygen and minerals in water using materials like sand, perlite, cocopit, or glass wool is essential.
- Common mediums like coco peat can be used for cultivation.
- Implementation can take place in dedicated school spaces or through arrangements.
- Students aged 13-17 engage in club activities focused on hydroponic farming.
- Utilization of hydroponic farming kits, available online.
- Duration: Approximately one month or less.



Narrative and Explanatory:

Students conduct potential research in groups on various topics related to hydroponic farming, exploring the versatility of this soilless agriculture technique.

Debriefing Session

- Soilless agriculture, such as hydroponic farming, not only conserves soil and water but also prevents soil erosion, reduces food loss through controlled conditions, and minimizes pesticide use.
- Non-Formal and Student-Focused

Further Reading:

- Asgen Blog
- Hektas - Soilless Hydroponic Farming
- Populertarim - Hydroponic Farming



Activity 2: Art of Nature

Overview:

Art can be crafted from nature itself, emphasizing the use of natural elements without the need for additional materials. This module encourages students to gather various natural items such as leaves, branches, rocks, and even unexpected elements like plastic waste, creatively arranging and combining them to produce nature-inspired art.



Aim:

- **Use of Natural Materials:** Encourage the utilization of natural elements in art.
- **Green Practices Awareness:** Raise awareness about environmentally friendly practices.
- **Critical Thinking and Up-cycling:** Foster critical thinking and creative reuse through up-cycling.





Expected Outcomes:

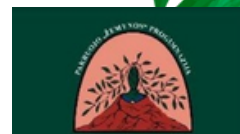
- Reduced Material Usage: Promote a decrease in the use of additional art materials.
- Art Reuse: Encourage the reuse of the created nature-inspired art.
- Conservation of Natural Resources: Instill a sense of responsibility for conserving natural resources.

Contents

Description of Activities:

- Organize a field trip to a green area where students can collect natural elements like stones, branches, mud, and unconventional materials such as trash.
- Students bring these collected materials to their art classes, creatively using them to craft their projects.
- Target Group: High school students aged 13-17.
- Monthly Duration: Every last Friday of the month.
- Culmination: An exhibition showcasing the "Art of Nature."





Debriefing Session

- Students present their creations during the exhibition, discussing their ideas and demonstrating the craft-making process.
- Emphasize the importance of saving natural resources, recognizing that nature provides everything needed.
- The students realize they don't require extra materials, fostering an awareness of resource conservation.
- The module concludes by offering students a fresh perspective, shaping their future outlook.



Further Reading:

- Nature Journal - Nature and Art Articles
- Tate Etc. - Opinion: Art and Nature

Activity 3: Share your food with your friends

Overview:

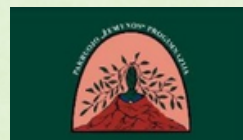
We want to stop the lack of food and be useful to the environment and we want to start this from our school lunch hall with our students

At the food waste collection point in the cafeteria or lunch hall, one student waits during lunch and undertakes the task of sorting the food. The separated food is left at the Animal Shelter by another student after school.



Aim:

- Preventing food waste is possible
- Thus, while the students are aware of not wasting the food and to help the ones who need like the animals
- The food will help animals to live
- Students will learn it and make it by themselves so it will be sustainable



Expected Outcomes:

- Students will be able to do the decomposition process
- Feeding the animals
- Development of a sense of solidarity in students
- Students will learn to help the all livings
- Students will do it and write the steps during time they will learn and observe the achievements of the process

Description of Activities:

● You can do this after lunch time at your school the students are totally 16 Students but they will rotate and they are between 9-11 Ages here the family will be in part at the end of the activity so we will be with our parents and this cooperation will be good for our students

In the lunch hall the students finish their lunch and at that time these steps can be followed:

- 1.**step:** 3 responsible students assigning their friends to sort the food at the food collection buckets in the cafeteria
- 2.**step:** Taking the food collected at the end of lunch to the waste food storage area by the students in charge
- 3.**step:** After school, a student and his/her family take the waste food to the Animal Shelter and deliver it.

Note: Three students are assigned to the cafeteria during meals. One student is assigned with his/her family for waste transportation. These students are in the Animal Protection Club and will rotate. total 10 students the activity takes 40minutes

- Animal Protection Club students in your schools can be assigned to sort the leftover food in the cafeteria.
- Your assigned students can do this task on a rotating basis.
- Students take the food boxes in which the food is separated to the waste food collection area.

The food accumulated here is taken to the Animal Shelter at the end of the day with the families of the students in charge.



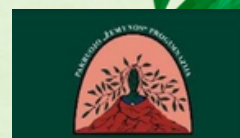
Debriefing Session

It is thought that helping the others make you happier so we aim our students learn this and the importance of protecting nature and not to waste food. They help with those to the animals and the students will gain the awareness of the food and the love of animals and also feel responsible of the animals. Students will understand the benefits of this kind of sharing and when they learn it they will make the younger students learn after they teach they will get the sustainable results.



Further Reading:

● <https://www.wedontwaste.org/>



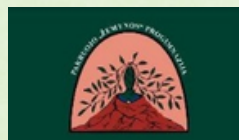
MODULE 5: BIODIVERSITY PROTECTION



Theoretical Part

Keep the Garden Clean

Educating students about responsible waste disposal holds significant environmental and civic importance. Approximately 80% of the rubbish in the sea originates from cities, transported through secondary waterways like streams and torrents. Instilling the practice of avoiding littering and encouraging students to keep spaces clean, even beyond their belongings, contributes substantially to environmental impact and fosters civic responsibility.



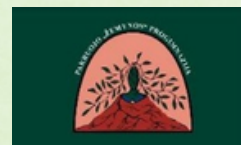
Herbarium of Garden Plants

Contrary to popular belief, green practices don't necessitate creating vegetable gardens, which can, in fact, harm biodiversity. Instead, the crucial message is conveying to students the value of variety in fostering richness. Even what's commonly perceived as 'weeds' plays a vital role in the Earth's ecosystem. Building a herbarium together, collecting fallen leaves, and understanding the species and their ecosystem roles provides a practical and educational approach.

Object Life Cycle

It's imperative to teach students that objects, like clothes, can have a new life even after they are no longer used. Rather than accumulating dust at home, giving these items to someone who can use them is more sustainable. Establishing an exchange corner in schools, where objects, books, and clothes no longer in use can find new owners, serves as a meaningful initiative to encourage reflection on the planet's resources.





Practical Part

Activity 1: I SORT WASTE - I SAVE NATURE



Overview:

Pollution, caused by the release of hazardous substances into the air, water, and soil, poses threats to ecosystems and life. Human-generated waste, from plastic to microplastics, contributes significantly to ocean pollution. Packaging waste, in particular, persists in landfills, polluting the environment. Sorting and recycling these materials not only save resources but also reduce pollution and energy consumption.

Aim:

- Encourage Ecological Approach: Instill an ecological mindset and responsibility among schoolchildren.
- Promote Waste Reduction: Involve students in waste reduction campaigns.
- Educate on Recycling: Familiarize students with the reuse of secondary raw materials and the importance of waste processing.



Expected Outcomes:

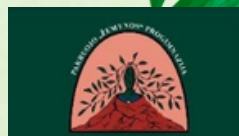
- Environment Protection: Foster a sense of responsibility for protecting the environment among students.
- Community Involvement: Encourage students to involve family, friends, and relatives in waste reduction efforts.
- Hands-on Learning: Through creating dolls from secondary raw materials, students grasp the concept of reusing waste.



Description of Activities:

- First Week: Educational lessons on waste sorting and recycling, with 8th graders leading sessions for 5th-7th graders.
- Second Week: Discussions on pollution sources and their impacts, with students presenting findings through oral or poster presentations.
- Third Week: "Darom" campaign where 5th-8th graders collect and sort garbage in the city area, contributing to the global initiative "Let's Do It."
- Fourth Week: Production of dolls from secondary raw materials by 5th-8th graders, displayed at an exhibition.





Debriefing Session

- Organizational Working Group: Comprises science teachers, school administration, two responsible students from each grade (5-8), and class leaders.
- Assessment: Utilizes the "One-minute" method for self-assessment, gauging students' understanding of waste sorting and recycling.

Further Reading:

- ZaliasisTaskas.lt - Waste Management in Lithuania
- Google Ads - External link [Note: The provided link appears incomplete or unclear; please verify for accuracy.]



Activity 2: Herbarium of Garden Plants

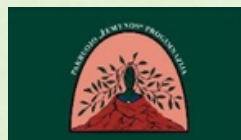


Overview:

Nature serves as a unique space for learning, providing natural remedies and examples. The relationship between humans and nature is a crucial focus for education to achieve sustainable development in a consumer society. In urbanized environments, parks and gardens within schools become essential green spaces for enhancing natural science education.

Decomposers play a significant role in nature, transforming plant waste into soil and providing fertilizers for plant growth. The collaboration between plants and decomposers sustains natural ecosystems. This module aims to explore the variety of plants on school grounds, create a "Garden" picture from a plant herbarium, and establish a "forever living" ecosystem of garden herbaceous plants in a bottle.





Aim:

- Familiarize students with the variety of plants on school grounds.
- Create a "Garden" picture using a plant herbarium.
- Develop a "forever living" ecosystem of garden herbaceous plants in a bottle and observe its life.

Expected Outcomes:

Students protect their environment and develop skills in environmental conservation.

Activities in the green learning environment guide students to understand plants' significance and create a herbarium picture.

Observing the ecosystem in a bottle enhances students' understanding of plant processes and their role as producers.



Description of Activities:

Duration: 5 weeks

Participants: 5-6th grade students

Organizers: Science teachers

Dissemination: Information about the event is published on the school's website, social networks, and in the press.

● **Ice Breaking:** Each week, students engage in crossword activities with various themes.

● **First Week:** Study of plant variety on school grounds using the iNaturalist app. Students explore plants through senses, draw, photograph, and learn about their biology and role in nature.

● **Second Week:** Creation of a herbarium from plant leaves. Students gather information on herbarium creation and spend the next two weeks preparing and drying plants.



- **Third-Fourth Weeks:** Preparing and drying plants, emphasizing the importance of plants to ecosystems.
- **Ecosystem Creation:** In one lesson, students create a garden herbaceous plant ecosystem in a bottle, observing and recording changes.
- **Fifth Week:** Production of the "Garden from the Herbarium" painting. Students create a garden diagram and glue dried herbaceous plants.

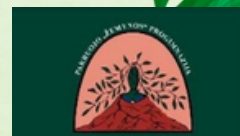
Debriefing Session

- **Organizational Working Group:** Comprising science teachers and two responsible students from 5-6 grades.
- **Discussion of Results:** Occurs in autumn, assessing changes in the garden ecosystem in the bottle. Students present results with photos during an afternoon session, followed by an exhibition in the school.

Further Reading:

- In the first week, teachers can use a presentation for the study period with all the plants.





Activity 3: The Nest Raising Campaign to Celebrate Earth Day

Overview:

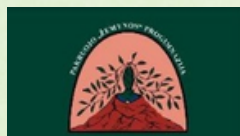
March 20th marks Earth Day, followed by the International Day of Forests on March 21st. These days draw global attention to environmental issues, climate goals, and the importance of maintaining a clean environment. April 1 is World Bird Day, emphasizing awareness of endangered birds and encouraging nest-building. Nest-raising campaigns are a valuable initiative to provide birds with suitable habitats as they return for breeding during spring.



When birds return to Lithuania in spring, finding suitable nesting places becomes crucial for their reproduction. Building nests in forests becomes a means to compensate for the loss of natural habitats. This campaign benefits various bird species, especially insect-eating birds that contribute to tree protection and forest sanitation. Nests are essential not only for small birds but also for ducks, bats, owls, and dormice.

Aim:

Raise nests for birds in commemoration of Earth Day to provide suitable nesting places upon their return.



Expected Outcomes

Develop students' understanding of preserving bird diversity and their benefits to plants.

Familiarize students with proper instructions for making nests for different bird types.

Raise nests for birds on Earth Day.

Organize a school photo exhibition to celebrate World Bird Day.

Description of Activities

- Promotion Period: February to April.
- Participants: 5-8 grade students.
- Project Organisers: Science teachers.
- Dissemination: Information about the event published on the school's website, social networks, and in the press.

February:

- Production of Nests: Students make nests at school or at home with their parents, adhering to specific rules:
- Use natural, unlaminated, unpainted boards for easier bird clinging.
- Avoid painting nests to ensure proper bird breathing.
- Do not attach perches to prevent predatory animal access.
- Create nests of various sizes for different bird species.

March:

- Nest Building: Students go to the forest or park to build nests in celebration of Earth Day.
- Educational Lesson: An ornithologist conducts a forest lesson, sharing insights into bird life, feeding, migration, and safe nest-building.



April:

- Photographing Birds: Students capture images of birds that have returned to Lithuania and organize an exhibition.
- Brainstorming Session: Students in grades 5-8 engage in a brainstorming session titled "What Do I Know About Birds?"



Debriefing Session

- Organizational Working Group: Includes teachers of natural sciences, life skills, and two responsible students from grades 5-8.
- Knowledge Assessment: A brainstorming session tests students' understanding of bird nature and nest-building.



Activity 4: Earthworms in Compost

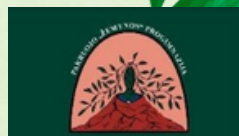


Overview:

In the pursuit of environmental sustainability, composting plant waste emerges as an eco-friendly practice. Utilizing biodegradable waste as a nutrient-rich substrate benefits school flower beds, reduces landfill pollution, and trims municipal costs associated with green waste removal. The resultant biohumus enhances soil composition, improves water absorption and retention, fostering healthier and more resilient plants. Growing earthworms in compost accelerates the conversion of plant waste into beneficial biohumus, rich in minerals.

Aim:

Make compost from plant waste collected on the school grounds.
Understand how earthworms contribute to the creation of useful biohumus.



Expected Outcomes:

- Develop students' understanding of the benefits of biohumus for plants.
- Teach students how to make compost from vegetable waste.
- Familiarize students with nature's diversity, natural cycles, and cultivate responsibility through earthworm care.
- Reduce utility costs for green waste removal from the school territory.

Description of the Activities:

Project Duration: September-October.

Participants: 5-8 grade students.

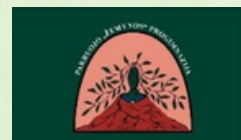
Project Organisers: Science teachers.

Dissemination: Information published on the school's website, social networks, and in the press.



September:

- Set up a compost bin on the school grounds for vegetable waste.
- Use spacious wooden or plastic boxes with holes for aeration and optimal humidity.
- Conduct a tree leaf raking campaign, adding leaves to the compost bin.
- Include suitable food and green waste for earthworms like kitchen scraps, garden waste, coffee grounds, and eggshells.
- Regularly turn the compost to facilitate decomposition and reduce odors.



September–October:

- Organize a composting box installation.
- Add cut grass and layered tree leaves to the compost bin.
- Introduce kitchen waste, garden debris, coffee grounds, tea bags, and shredded fruits and vegetables.
- Turn the compost bin to enhance decomposition and reduce odors.
- Educate students during breaks on the benefits of composting and biohumus for nature and plants.

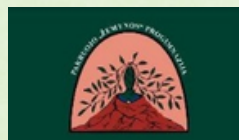
Debriefing Session

- Organizational Working Group: Science teachers and two responsible students from grades 5-8.
- Observation Period: September to June, monitoring plant waste decomposition, earthworm population growth, and documenting changes.
- End of June: Discuss results, focusing on the formation of biohumus in the compost bin.

Further Reading:

Every reference must be done in APA format and in alphabetical order.

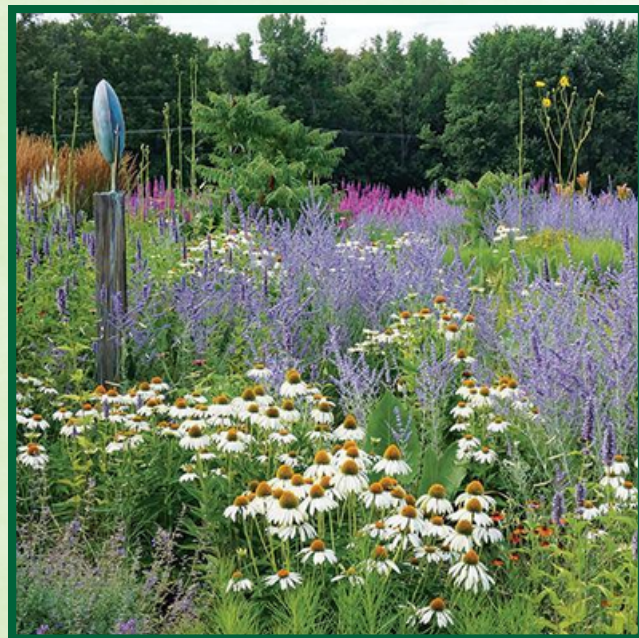




Activity 5: Educational Program "Naturalistic Flower Garden"

Overview:

Bees play a crucial role in nature and human life, acting as both pollinators and honey producers. The honey they produce possesses medicinal properties, serving as an anti-inflammatory agent. Their pollination efforts are essential for approximately 250,000 flowering plant species globally. The establishment of a natural meadow aims to diversify vegetation, aiding bees in pollinating more plants.



Aim:

- Diversify wild meadow vegetation for enhanced bee pollination.
- Acquaint students with natural meadow vegetation and the benefits of bees for plants and humans.
- Teach students to weave a wreath from plants and create a composition.
- Develop students' ability to distinguish a natural meadow flower bed from an artificial one.

Expected Outcomes:

- Increased understanding of the benefits of biohumus for plants.
- Knowledge of composting techniques using vegetable waste.
- Familiarity with nature's diversity and natural cycles through earthworm care.
- Reduced utility costs for green waste removal from the school territory.



Description of the Activities:

Project Duration: September-June.

Participants: 5-8 grade students.

Project Organisers: Science teachers, life skills teachers.

Dissemination: Information published on the school's website, social networks, and in the press.



I Part: Natural Meadow Establishment

Collaborate with ward staff to diversify the vegetation of the wild meadow in the oak park.

Prepare the meadow area in May, removing perennial weeds and cultivating the soil.

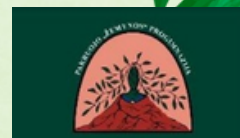
Conduct lessons in June and September at the oak park, involving students in capturing and studying meadow plants.

Organize discussions and integrate science lessons to reinforce knowledge about natural meadows, plant uses, and medicinal properties.

Hold an integrated science lesson with technology and art in June and September, teaching students to weave wreaths and create compositions from meadow plants.

Arrange a photo exhibition of the students' wreaths and compositions.





II Part: Tulip Planting and Educational Program in the School Garden

In autumn, plant tulips on the school grounds with the participation of 5th-8th grade students.

Announce the "Donate One Tulip Bulb to the School" campaign.

In spring, compare flower beds on the school grounds with artificial meadow areas.

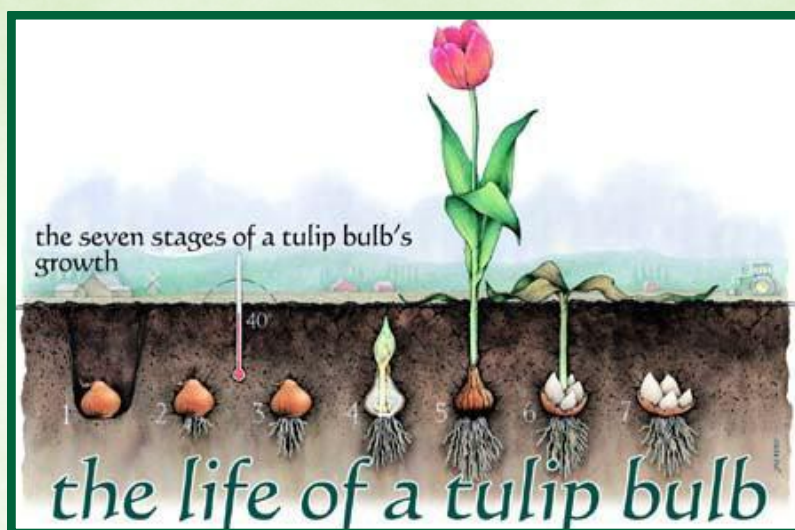
Conduct an educational program in the school garden where students present their work using the PowerPoint program-

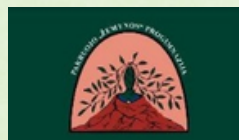
Implement a task involving the identification of plants in flower gardens and natural meadows using the Padlet.com application through a QR code.

Debriefing Session

● Organisations Working Group: Science teachers, life skills teachers, and two responsible students from grades 5-8.

● Method: Round table discussion using cards with specified reflection questions, such as preferences, areas for improvement, etc.



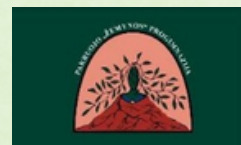


MODULE 6: STAY INFORMED

Theoretical Part

To initiate the actions outlined in this decalogue successfully, knowledge stands as the foundational and most crucial element. Numerous resources, spanning films, cartoons, documentaries, magazines, and comics, cover the climate crisis and best practices. A teacher's primary duty, ensuring the development of a green conscience in students, begins with dedicating time to information. Stimulating curiosity, fostering information exchange among peers, and providing opportunities for exploration form the initial steps.





MODULE 7: CLOSING

Theoretical Part

Research and Autonomy:

Methodologies employed in the program encompass various types. The initial focus involves information retrieval. Participants engage in games or workshops, delving into more or less specific subjects. Encouraging autonomy in research, participants set their own objectives, allowing for a deeper understanding of personally relevant themes. This autonomy empowers participants to internalize the issues, potentially becoming advocates for the cause.

Experimentation and Problem-Solving:

Another methodology centers around experimentation. When faced with a problem, participants are prompted to ideate solutions collectively or individually, either in situ or theoretically. Actively seeking solutions necessitates experimentation, where participants learn by doing, employing their senses to observe changes and results. This approach encourages a holistic understanding of the problem's different facets.

Communication and Transmission:

Participants may also be tasked with reporting on a subject, issue, or controversy. In this context, they must locate information and determine the most relevant means of transmission for their audience. Various media, such as YouTube videos, documentation, state-of-the-art presentations, conferences, experiments, and graphics, can be employed. Transmitting knowledge requires a solid acquisition of the subject matter and the ability to choose the most effective transmission methods, emphasizing pedagogy.



Practical Part

Overview:

This activity encourages participants to go outdoors, connect with nature, and engage with guided questions provided by the trainer. It aims to heighten awareness of the mobility's entirety, serving as a reflective tool to consolidate knowledge and experiences gained.

Aim:

- Encourage participants to reconnect with nature, promoting environmental awareness and sustainability.
- Facilitate reflection on the training's activities and how the knowledge gained can be applied.

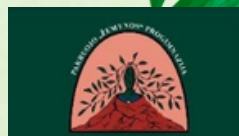
Expected Outcomes:

- Participants will renew their connection to nature, reinforcing their commitment to green education and sustainability.
- Participants will have a clearer understanding of the training content, enabling them to integrate these lessons into their schools.

Contents

Description of the Activities

- Selecting a Meaningful Location (10 minutes)
- Participants find a place within a designated area where they feel connected to nature.



- Time is given to settle in their chosen location.
- Guided Nature Connection and Reflection (20 minutes)
- Immersion in nature, guided by reflective questions on training experiences and lessons learned.
- Recalling Previous Activities (15 minutes)
- Focus on summarizing key activities and insights from the training program.
- Committing to Green Education (15 minutes)
- Reflection on applying knowledge and experiences to promote sustainability in schools.
- Sharing and Exploring (30 minutes)
- Presentation of project timelines and commitments to Green Education.

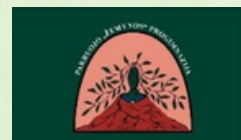
Debriefing Session

A session to consolidate experience and insights, involving open discussions and sharing of action plans. This aims to deepen understanding of the training and clarify application methods.

Further Reading:

N/A





MODULE 8 – EVALUATION

Theoretical & Practical Part

Overview:

Engages participants in interactive exercises to assess their training experience, aiming to collect feedback on content, trainer, and overall learning experience.

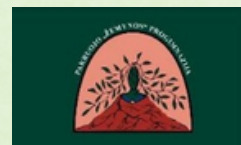
Aim:

- Gather feedback from participants.
- Assess training aspects including content, trainer, and overall satisfaction.
- Provide an opportunity for participants to express opinions and experiences.

Expected Outcomes:

- Comprehensive understanding of participants' perspectives.
- Identification of improvement areas.
- Enhanced participant-trainer communication.





Description of the Activities:

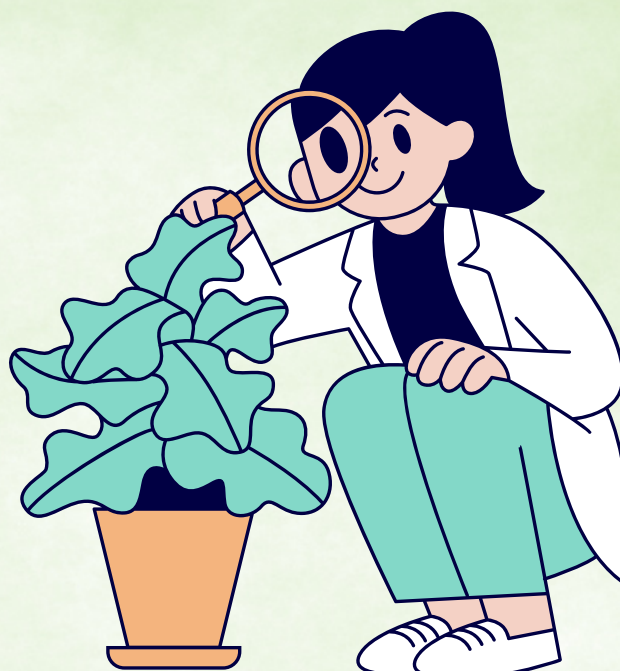
- The First Flipchart (Criteria Evaluation)
- Evaluation of predefined criteria using symbols on a flipchart.
- The Second Flipchart (Personal Experiences)
- Sharing personal experiences related to knowledge, growth, skills, and venue insights.
- The Third Flipchart (Trainer Feedback)
- Providing feedback for the trainer.
- The Fourth Flipchart (Overall Satisfaction)
- Participants express their overall training experience and share wishes or suggestions.

Debriefing Session

Review and discussion of the feedback provided, identifying common themes and areas for improvement.

Further Reading

Examples of completed evaluation flipcharts.





Disclaimer

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