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**Science and Art- Rediscover, Research and Creative Recycle
Module 4.Science & Nature**

Bahna Mare

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„Science and Art- Rediscover, Research and Creative Recycle” Module 4. Science & Nature



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Sprijin+ Association, Romania, coordinator
CrowdAid A.P.S., Ente del Terzo Settore, Italy, partner
Room For Art, Cyprus, partner
VIBE Slovakia, Slovakia
Erdemli Ilce Milli Egitim Mudurlugu, Turkey, partner
Eko Tim Istok, The Republic of North Macedonia, partner

Transnational meeting no. 4

SCIENCE & NATURE

Erdemli, Turkey, Juny 16-17, 2023

June 16, 2023

Agenda of the activities:

- Hiking in Erdemli Nature and Science School Area
- Mud Art Workshop Event
- Compost Workshop
- Waste Materials Recycling Workshop

Through these activities, we aimed to strengthen our connection with nature, raise environmental awareness, and promote sustainability.

1. Mud Art Workshop for Adults:

Objective: To provide adults with a creative experience using natural materials, fostering a connection with nature, and stimulating imaginative thinking.

Description: The workshop can be held outdoors or indoors. Participants will be provided with natural and unprocessed clay materials. Instructors will guide them on shaping clay and creating artistic creations. Adults will have the freedom to experiment with sculpting, pottery, or free hand drawing to express their creativity.

2. Nature Walk and Observation Activity for Adults:

Objective: To help adults relax, explore the beauty of nature, and increase their environmental awareness through guided nature walks.

Description: The activity can take place in a natural area or a nature park with experienced guides. During the walk, the guides will provide information about the surrounding natural environment, various plant and animal species, and the importance of conservation. Participants will be encouraged to observe and appreciate the natural life and ecosystems.

3. Compost Workshop for Adults:

Objective: To educate adults about the recycling of organic waste, promoting sustainable agricultural practices, and encouraging harmony with natural cycles.

Description: The workshop can be conducted in a garden or an appropriate space. Participants will learn about the process of composting, the proper collection of organic waste, and how compost benefits plant growth. Practical composting

techniques and the transformation of organic waste into nutrient-rich compost will be demonstrated, giving participants hands-on experience.

4. Creative Recycling Workshop for Adults:

Objective: To empower adults with knowledge of sustainable design and recycling practices by encouraging them to creatively repurpose waste materials, fostering their environmental consciousness.

Description: The workshop can be organized in a designated space or studio. Participants will be provided with various waste materials (plastic bottles, cardboard boxes, old newspapers, textile scraps, etc.). Instructors will guide them on how to transform these materials into creative art works or functional items. Participants can use their skills to create recycled art, decorative pieces, furniture, or useful products.

Presentations About:

As part of the project activities, informative presentations were made on "What is 'Forest/Woodland Education'? How to integrate it with education and curriculum achievements?" The ecological educational system in our partner countries and our country was introduced through open discussions, PowerPoint/Prezi presentations, and other presentation methods.

Visiting Local and Public Institutions Supporting "Woodland Education" in Erdemli:

We also visited local and public institutions in Erdemli that support "Woodland Education." These visits aimed to strengthen the collaboration on eco-education and provide local support for our project.

Study Visits to Economic Agents Dealing with Environmental Protection/ Creative Recycling:

As part of the project, we also had study visits to economic agents who are actively engaged in environmental protection and creative recycling. These visits aimed to increase participants' environmental awareness and inspire them with creative recycling projects.

Discussions About Project Implementation Activities:

The presentations and study visits initiated fruitful discussions about the project's implementation activities. Project partners evaluated the achievements and identified areas for improvement. The exchange of ideas and strategies aimed to enhance the project's quality and pave the way for better future activities.

Methodology: Formal and Non-Formal Education Methods:

The methodology used during the activities combined formal and non-formal education methods.

Formal education methods included workshops and presentations delivered by instructors, while non-formal education methods focused on participant-centered and interactive activities. This approach allowed participants to actively learn, experience, and interact, making the activities more effective.

Through these adult-oriented activities, the "Science and Art - Rediscover, Research, and Creative Recycle" project fostered a deeper connection with nature, raised environmental awareness, and promoted a sustainable mind set among the participants.





June 17, 2023

Cultural visit in Cappadocia

Cappadocia is one of the most popular and emblematic tourist destinations in Turkey, an ancient, magical region, a surreal landscape recognized for its unique geological, historical and cultural characteristics. Cappadocia defies any description, being a natural, open-air museum located between Nevsehir, Nigde and Aksaray, this area also being the oldest wine-growing region in the world. The dozens of hot air balloons that rise at sunrise over this area of wild beauty, the caves and the houses carved into the rock and the two open-air museums (Goreme and Zelve), the handicraft products, pottery and "kilim" weaving are just a few experiences that recommend visiting this magical place.

“Mountains are the great cathedrals of the earth: walls of rock, mosaic of flowers, choirs of springs, altar of snow, vault of stars.” (John Ruskin)

Cappadocia is one of the most attractive tourist destinations in Turkey, being described more than a few times as a place torn from fairy tales, a place where nature, helped by the hand of man, has given rise to fascinating settlements.

One of the main attractions of Cappadocia is flying with a hot air balloon due to the superb landscape that can be admired from above. Cappadocia is the most famous location for balloon flights in the whole world.

All hot air balloons rise in the morning to catch the sunrise.

Strange structures emerged from volcanic eruptions, which look like mushrooms, towers were carved by the erosion that started several thousand years ago and continues to change the landscape even today. Thousands of troglodyte dwellings dug into the soft rock, whose openings can be seen, bring an unreal touch to this unusual nature.

This region shelters hundreds of ancient underground cities, some with 8 levels, whose inclined corridors, very narrow, made it difficult for several people to enter. They were built by the Hittites to protect themselves from invasions, and after

they disappeared, the Christians improved them. Certain rooms became places of worship.

Derinkuyu and Kaymakli are the most visited underground cities.

Visiting Cappadocia is an opportunity to discover many cave villages, spectacular valleys, authentic cities.

<https://www.omiesiunadecalatorii.world/home/capadoccia>



Creative recycling of rubber

Constantin Pricope, Gabriela-Brandușa Horlescu

Globally, the significant increase in the number of cars has boosted the production of tires and consequently the amount of waste tires. Currently, used tires are thrown either on the side of the roads or in the water creating a problem for the environment.

Over a billion tires end up worn out every year. Tire recycling has always been an important process, a priority for humanity. Tires represent a category of waste that we encounter everywhere in the environment, being also some of the most reusable waste because they are made of a resistant and durable rubber over time.

For this reason, the recycling sector of used tires must be developed because they have a negative impact on the environment in terms of air, water and soil pollution.

Therefore, it is essential to understand the importance of the recycling process of scrapped used tires.

The creative recycling of old tires can be a very pleasant activity, especially if you live in the yard and have old tires on hand for which you can no longer find a use. They can be transformed into pieces of furniture for the home or garden, but also into other decorative objects.

Using used tires, through creative recycling, we made:

- garden furniture: chairs, table supports.





- flowerpot



- decorative elements for the garden: swans, snails





-plate



The benefits of the tire recycling process through the creation of new products are essential to ensuring the sustainability of the planet.

Creative wood recycling

Constantin Pricope, Gabriela-Brândușa Horlescu

Wood is a raw material used in construction, stationery, furniture making, parquet, furniture accessories, decorative objects and many others. Wood is a resistant raw material, the costs are not high, it is not difficult to procure, it is easy to process, it is insulating and it can be used in various ways.

Before we get to the wood recycling part, we can find ways to reuse wood or wood remains after we build something. Each of us can make something out of wood.

We can make various objects from the surplus wood that remains after a construction or from branches from dry trees:

- houses for birds
- wooden decorations.
- wooden shelves in various forms for storage or decorative purpose;
- decorative objects that can cheer up your home;
- storage boxes;
- toys;
- decorative wooden objects for the garden;
- chairs, tables.

From the branches of dry trees we made ornaments to beautify our garden: bicycle, flowers, flower stand, etc.

Each of us can participate in small but valuable percentages in protecting natural resources.

Recycling, reusing wood will inevitably reduce the demand for timber and implicitly avoid deforestation.



Creative recycling of sandwich panels

Constantin Pricope, Gabriela-Brandusa Horlescu

Sandwich panels are layered boards, made of different light materials and good insulators, protected by various covers made of resistant and hard materials.

The core of the panels can be made of glass wool, polyurethane foam or extruded polystyrene foam, and the exterior is made of PVC, veneered plywood, aluminum or laminated sheet.

Both builders and people who want to build increasingly choose sandwich panels to the detriment of traditional materials. The reduced assembly time and easy transportation are convenient for the teams of specialists who take care of the work, and the owners benefit fully from the fireproof, heat-insulating and sound-insulating properties of these structures, against lower costs.

However, they also have domestic applications, from the thermal insulation of the walls of civil buildings to their covering. They can be used for building partition walls, for roofs, for insulating facades and for interior and exterior cladding.

We can recycle these panels that were used in construction.

Using a hacksaw, I cut round supports for chairs and tables from sandwich panels. They were cleaned, sanded and then painted in different colors.





We also cut out circular crowns from panels, from which I created crowns for various events.



The reuse of sandwich panels contributes significantly to environmental protection.

“Science & Nature” workshops

Gabriela-Brândușa Horlescu

July 23, 2023, Romania

In our workshop organized on July 23, 2023, we focused on the creative recycling of waste. By recycling tires, wood waste, sandwich panels, paper, thread, string we created an ambient and relaxing decoration in the garden.

Objectives:

- improving and maintaining the quality of life;
- informing and increasing knowledge about the environment;
- awareness of the population's role in creating and preventing environmental problems;
- researching ways to improve the state of the environment, through training the community in green space care activities;
- increasing the desire to protect, respect and protect nature;
- promoting positive attitudes to protect the environment

We all enjoyed the results of our work! Creativity has no limits, we just have to stimulate it, activate it!





July 1, 2023, The Republic of North Macedonia

Regardless of whether we want a walk with the family, a relaxing day away from the city or we want to do some outdoor exercises, the middle of nature is definitely ideal for all kinds of interesting activities. Moreover, the activities will definitely be more attractive when we can enjoy the sun, grass and fresh air.

Using flowers, leaves, branches, we can make unique floral ornaments to offer to loved ones: colleagues, friends or our family.

Using recyclable materials and elements from nature, in the workshop were created: paintings, supports for flowers, crowns, decorative objects.



Interactions with the natural environment can increase well-being, vitality, self-esteem and life satisfaction. The stronger connection we feel with nature, the greater the benefits to physical and mental health.

The more connected we are to the natural environment, the happier we are.

A day in nature, a green day, a happy day!

July 14, 2023, Cyprus

In the workshop, the Erasmus program, our project and the activities carried out in the field of creative recycling were presented.

The objective of the project is to develop the capacity of adults to intervene in the environmental education, by training adult skills and by developing strategies for approaching environmental education in context formal and non-formal. In this context, our project and the partnership between the 6 associations aims to develop a transnational program for the development and exploitation of creativity of adults for protecting the environment and finding new ways to creatively recycle waste.

Until now we have all discovered new methods of creative recycling. Creative recycling is primarily about learning, a lifelong learning!



Electronic Component Recycling: Turning Waste into Sustainable Resources

Dănilă Ticușor-Gabriel

In the age of advanced technology, electronic equipment is fast becoming an integral part of our daily lives. However, as technology evolves and devices become more sophisticated, it is the frequent changes in gadgets that lead to the increase in e-waste. In a world where technology is changing at an accelerated pace, a crucial question arises: How do we deal with e-waste correctly and sustainably?

This article explores the importance of electronics recycling and how this process can help protect the environment and conserve natural resources. From used mobile phones, to computers and old household appliances, the correct recovery of these components is essential for our sustainable future.

Recycling of electronic components is important for several reasons:

- Protects the environment. Electronic components often contain toxic materials such as lead, mercury and arsenic. These materials can contaminate soil, air and water if they are disposed of in landfills. Recycling electronic components helps prevent these pollutions.

- Reduces the amount of waste. Electronic components are a major source of waste. Recycling helps reduce the amount of waste that ends up in landfills.

- Saves resources. Materials from electronic components can be reused to produce new products. Recycling helps save natural resources such as metals, plastic and glass.

- Create jobs. The electronics recycling industry creates jobs around the world. Recycling helps stimulate the economy and create new employment opportunities.

Here is a list of PC components that are best recycled:

- Motherboards. Base plates are made of plastic, metal and ceramic, all materials that can be recycled.

- Processors. Processors are made of silicone, which is a recyclable material.

- RAM memory. RAM is made of ceramic, which is a recyclable material.

- Storage. Storage drives such as hard drives and solid state drives are made of metal and plastic, all materials that can be recycled.

- Power supplies. Power supplies are made of metal and plastic, all materials that can be recycled.

- Cases. Computer cases are made of metal and plastic, all materials that can be recycled.

CRT monitors and LCD screens contain a variety of materials that can be recycled, including:

- Glass: Glass from CRT monitors is used to make new glass, such as bottles, jars, windows, etc.

- Metal: Metals from CRT monitors, such as aluminum, copper, and iron, can be recycled to make new products, such as cars, electronics, and metal construction.

- Plastic: Plastic from CRT monitors can be recycled to make new products such as furniture, packaging and toys.

- Electronic components: Electronic components in CRT monitors, such as motherboards, processors and memory, can be recycled to obtain valuable materials such as gold, silver and copper.

It is important to recycle CRT monitors and LCD screens as they contain toxic materials such as lead, cadmium and mercury. These materials can contaminate soil, air and water if they are disposed of in landfills. Recycling them helps prevent pollution and save natural resources. There are several technologies for recycling electronic components, but the most common ones include:

- Mechanical processing: This is the simplest recycling technology. Electronic components are crushed and then manually or automatically sorted to recover valuable materials such as metals, plastics and glass.

- Chemical processing: This technology uses chemical reagents to dissolve materials in electronic components. Valuable materials are then recovered from the chemical solution.

- Thermal processing: This technology uses heat to break down materials in electronic components. Valuable materials are then recovered from the resulting gases and ash.

The recycling technology used depends on the type of electronic component being recycled and the valuable materials to be recovered. There are several ways to recycle computer components or electronic devices. You can take them to a recycling center, donate them to a school or charity, or sell them to a reseller.

Creative recycling of textile objects

Mihaela Mutu

The creative recycling of textile objects, also known as "upcycling", involves the transformation or reuse of old or used textile items into new and more valuable products. This approach has a number of benefits, including reducing the amount of textile waste ending up in landfills and reducing the negative impact on the environment. Upcycling can also lead to the creation of unique, personalized and valuable objects from seemingly useless materials.

Here are some ideas for creative recycling of textile objects:

- Transforming old clothes: You can recycle used or too small clothes, transforming them into other clothing items. For example, you can turn a pair of jeans into a skirt or a t-shirt into a bag.

- Making accessories: Small pieces of fabric such as scarves, handkerchiefs or pieces of fabric can be turned into accessories such as earrings, bracelets, brooches or hair clips.

- Making toys or decorative pillows: Using old textiles, you can create toys for children or decorative pillows for the home.

- Upcycling for furniture: Clothes or textiles can be used to upholster chairs or sofas, giving them a new and original look.

- Making reusable bags and bags: You can turn your old t-shirt or blanket into a reusable bag or shopping bag.

- Creating decorative objects: You can use textile materials to create paintings, decorative pillows, blankets or carpets to add more personality to your space.

- Patchwork and quilting: Gathering scraps of fabric to create patchwork or quilted blankets is a great way to recycle materials and get unique household products.

- Custom Clothing: Add new and creative details to your clothes, such as embroidery, colorful ribbons or other embellishments, to give them a new and fresh look.

Creative recycling of textile objects not only helps you to help protect the environment, but also to express your creativity and obtain truly unique and original objects. It's a beautiful way to give new life to old textiles and reduce the negative

impact on the environment. Here are some other ideas for creative recycling of textile objects:

- Jewelry Making: Use pieces of fabric, beads or other accessories to create unique necklaces, bracelets or earrings.

- Textile painting: Turns textile t-shirts, skirts or cloths into painting canvases. You can use textile watercolors or special textile paint to express your creativity.

- Combining with other materials: Combine textiles with other recycled materials, such as recycled paper or cardboard, to create complex artistic projects.

- Curtain and Drape Making: Turn old textiles into new windows or drapes for the home.

- Upcycling for kitchen accessories: Use textiles to create kitchen towels, kitchen gloves or dishcloths.

- Making floor mats: Transform old textiles into colorful floor mats to add extra comfort and style to your home.

- Recycling bedding: If you have old or used bedding, you can turn pieces of it into decorative pillows, cushion covers or pet beds.

- Making laptop and tablet pouches: Use old textiles and foams to create protective pouches for electronic devices.

- Eco-friendly gift wrap: Use pieces of fabric to wrap gifts in an eco-friendly way. You can use various creative wrapping techniques such as furoshiki (a traditional Japanese cloth gift wrapping technique) or create your own gift bags.

- Party and event decor: Use textiles to create ribbons, bows, flags or other decorative elements to add a special touch to your events.

Creative textile recycling is a fun and rewarding activity that allows you to express your creativity, save money and help protect the environment. Try to think of innovative ways to use old textiles instead of throwing them away, and you'll find that the possibilities are endless!



Plastic objects - creative recycling

Mihaela Mutu

Creative recycling of plastic objects is a great way to reduce the negative impact of waste on the environment and transform recyclable materials into useful and beautiful objects. This practice involves reusing or transforming plastic objects into new products or art, rather than throwing them away and contributing to environmental pollution.

Here are some creative ideas for recycling plastic items:

1. Plastic Bottle Flowers: Cut off the bottom of a colored plastic bottle, then cut it into narrow strips to resemble the petals of a flower. Gently heat the strips to bend them and create the shape of a flower. You can combine several flowers to make interesting and colorful bouquets.

2. Pen and Pencil Holders: Cut off the neck of plastic bottles and use the bottom as a holder for pens, pencils or other writing instruments. You can decorate them with acrylic paints or other recycled materials.

3. Desk Organizers: Turn plastic bottles into desk organizers, keeping your writing instruments and other work items tidy.

4. Plant pots: Cut the tops of plastic bottles and use the bottoms as plant pots. You can add holes for drainage and decorate containers with paints, colored paper or other materials.

5. Jewelry: Smaller plastics or colored parts of plastic bottles can be turned into interesting jewelry such as earrings, bracelets or necklaces.

6. Storage Boxes: Cut off the tops of plastic bottles, leaving the mouth open, and use them to store trinkets or other small items.

7. Decorative candles: Put small candles in plastic bottles and create original decorative candles. Make sure you use candles that fit the diameter of the bottle neck and that the candles are securely seated.

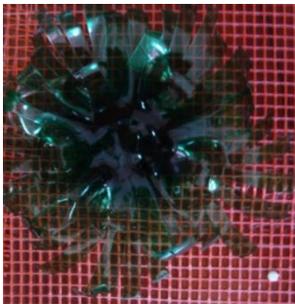
8. Plastic pillows and cushions filled with recycled materials: Use clean plastic bags to create pillows or cushions, filled with recycled materials, such as plastic bags or recycled pieces of plastic.

9. Art and Sculptures: Plastic can be molded and used to create various sculptures and works of art.

10. Gardening Parts: Turn plastic bottles into gardening tools or stands. For example, cut off the top of the bottle to create a mini-pot for potted plants.

These are just a few of the many ways in which you can transform plastic objects into useful and aesthetic things, thus helping to reduce the amount of waste and promote creative recycling. Encourage others in your community to take this innovative approach and find new ways to creatively recycle plastic.

Before starting a creative recycling project, make sure you educate yourself about the types of plastic you're using and how they can be properly recycled. In addition, recycling plastic can be a temporary solution, and adopting green alternatives and reducing plastic consumption are important steps to combat plastic pollution and protect the environment.



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