



Erasmus+

ECOFRIENDLY CHILDREN TEACHER E-BOOK



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Design from Waste

The aim of this activity:

To raise students' awareness about recycling.

To increase environmental consciousness.

To produce artistic designs using waste materials.



What do we need?:

Plastic, paper, metal, and glass waste materials, glue, scissors.

Implementation of the Activity:

Students will first be given preliminary information about the importance of recycling. They will then be asked to bring waste materials collected from their environment and households. Using the collected materials, they will design projects that they can transform into fashion accessories, utility items, or artworks.

The students will be guided to turn their designs into actual products using the collected waste materials. Throughout the project, students will be encouraged to create artistic designs from recyclable materials and to develop their creative thinking and manual skills. In this process, they will also be made aware of environmental issues and encouraged to participate in recycling efforts.



Creative Object Design through Recycling

The aim of this activity:

- Students will be able to explain the environmental benefits of recycling.**
- Students will distinguish between recyclable and non-recyclable materials.**
- Students will design a creative product using waste materials.**
- Students will develop a sense of environmental responsibility.**
- Students will enhance their group work and collaboration skills.**

What do we need?:

Cardboard boxes (e.g., milk cartons, shoe boxes), Plastic bottles and caps, Toilet paper rolls, Newspaper and magazine paper, Scissors, glue, tape, Colored pencils, markers, Colored paper, Labels and decorative materials

Implementation of the Activity:

The teacher initiates the lesson by asking the class: “What is recycling?” After collecting student responses, the teacher provides a brief explanation: “Recycling is the process of reusing waste materials to prevent harm to nature.” The teacher presents various waste materials and leads a discussion on which items are recyclable. Information is shared about the colors and meanings of recycling bins. Students are divided into groups of 3–4. Each group uses the provided waste materials to design and create a “creative object” (e.g., pencil holder, toy, desk ornament, etc.). The teacher circulates among groups to provide guidance and support. Each group presents their product to the class. Other students share their opinions on the presented products.



From Waste to Play

The aim of this activity:

- To promote environmental awareness and consciousness regarding recycling practices
- To enhance collaboration, creativity, and problem-solving abilities among learners

What do we need?:

Empty cardboard boxes, bottle caps, plastic cups. String, adhesive tape, scissors. Colored paper (optional). Dice, buttons, small pieces of scrap wood (depending on the game concept)

Implementation of the Activity:



The session begins with a brief presentation by the instructor highlighting the significance of recycling, its environmental implications, and the potential for reusing commonly discarded materials.

Students are organized into small collaborative groups consisting of 4 to 5 members. Within their groups, students engage in the design and construction of original games utilizing the provided materials.

Examples of possible games include:

“Cap Catch”: a game involving the collection or tossing of bottle caps

“Target Toss”: a precision game using cardboard boxes as targets

During this process, groups collaboratively cut, assemble, and decorate their materials, and formulate the rules for their games. While the teacher facilitates the process, creative and decision-making autonomy is encouraged among students.

Each group presents its completed game to the class, articulating the game’s name, objectives, rules, and the types of recycled materials employed in its construction. Following the presentations, students take turns playing each other’s games to evaluate and enjoy the outcomes.



Coding With Waste Rope, Attention, and Skill Development

The aim of this activity:

- Raising awareness among students about waste material
- Helping students increase attention and concentration
- Increasing students' skills by providing hand-eye coordination
- Increasing students' coding skills

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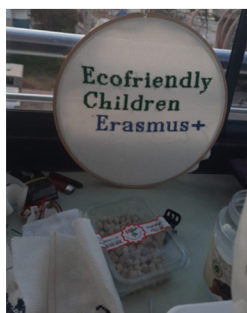
What do we need?:

<CODE/> Waste yarns, needles, fabric, hoops, coding image



Implementation of the Activity:

Before the activity, students are informed about the climate crisis. The importance of recycling is explained. Later, a coding study is carried out with waste ropes. While doing this study, students increase their attention and concentration. Students transform the studies they create with waste materials into cushions, scent bags, bags, etc.



Creative Object Design through Recycling

The aim of this activity:

To instill an understanding of sustainability by utilizing waste materials in creative processes

To raise awareness regarding environmental conservation and the importance of recycling

To develop students' cooperation and collaborative problem-solving skills

What do we need?:

Cardboard from television boxes, plastic bottle caps, fragments of compact discs, beads, straws, floral mesh, aluminum foil, seashells, cupcake liners, garbage bags, popsicle sticks, and candy rings



Implementation of the Activity:

The activity commenced with the projection of a *Caretta caretta* (loggerhead sea turtle) illustration onto a screen, accompanied by a class discussion on marine pollution and its detrimental effects on aquatic ecosystems. Particular emphasis was placed on the impact of plastic waste on marine biodiversity.

Following the discussion, students—together with their parents—examined the collected recyclable materials and collaboratively designed an artwork incorporating these elements. The process emphasized the repurposing of non-biodegradable items into meaningful visual representations, merging ecological awareness with artistic creativity.





Eco Art



The aim of this activity:

- To raise awareness about environmental issues and the importance of recycling.**
- To promote collaboration and problem-solving skills among students.**
- To cultivate an artistic perspective and aesthetic awareness.**
- To enhance environmental consciousness through artistic expression.**

What do we need?:

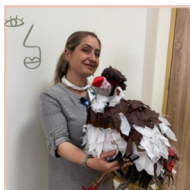
Large water bottles (e.g., carboys/demijohns), Scrap metal wires, Sponge pieces, Used paper, Cardboard boxes, Adhesive (glue), Old buttons, Plastic bottles

Implementation of the Activity:

Initially, students were introduced to the significance of recycling and its environmental implications through a concise instructional presentation. This session emphasized sustainable practices and explored techniques for the creative reuse of waste materials.

Following the presentation, the thematic framework and intended artistic output were established. In alignment with ecological concerns—particularly environmental pollution and the threat to endangered species—it was collectively determined that the students would design and construct a bird sculpture as a symbolic representation.

Collaborative student groups were then organized, and each group engaged in structured planning to determine how the available recycled materials would be utilized effectively. Within the classroom setting, each group was tasked with designing and constructing a distinct component of the sculpture. Under the supervision and facilitative guidance of the instructor, these individual components were subsequently integrated to form a cohesive and fully realized bird sculpture.



Cool cities - Green roofs to combat urban heat

The aim of this activity:

To understand how green roofs are a nature-based solution to combat urban heat and improve air quality, while developing their problem-solving and critical thinking skills through practical experimentation and data analysis. They will also be able to design and defend sustainable urban solutions that contribute to climate resilience.

What do we need?:

Wooden base or small wooden boxes (to simulate roofs) Soil or compost (for plant growth) Small plants (moss, grass or other low-maintenance vegetation) Sponges or cotton wool (to simulate water retention layers) Gravel or sand (for the drainage layer) Measuring and testing tools: Thermometers (to measure temperature differences) Lamps or heat sources (to simulate sunlight) Rulers and tape measures (for accurate construction of the model) Office supplies and stationery: Paper and notebooks (for sketching drawings and recording data) Markers, coloured pencils or crayons (for illustrations and posters) Scissors (for cutting materials) Glue and adhesive tape (for assembling models) Cardboard or foam board (for structural support in models)



Cool cities - Green roofs to combat urban heat



Implementation of the Activity:



Introduction to the concept of green roofs and their role in combating urban heat islands and promoting sustainability.

Students form groups and discuss how to design their own green roofs. They sketch out their ideas on paper and plan the materials to be used.

Then, using materials such as wood, earth, plants and other resources, they build their green roof models. Making sure that each group integrates water retention and drainage layers.

Once the models have been built, the groups test them by placing them under lamps (simulating sunlight) and using thermometers to measure the temperature differences in the green roof models.

The students analyse the data collected, comparing the temperatures on their models with those of an unplanted surface, debating how green roofs contribute to climate resilience.





Biodiversity

The aim of this activity:

Encouraging creativity and teamwork in constructing the 'Woodlouse Refuge.' Recognize the importance of the woodlouse and their interactions in the decontamination of soils from invisible pollutants (copper, zinc, lead, arsenic, cadmium), the contributions of the woodlouse to biodiversity and ecosystems and the important role in the nutrient cycle, soil aeration, and the breakdown of organic matter.

What do we need?:

- **Wooden boards (particle board for increased water absorption and retention)**
- **Cardboard**
- **Old tree leaves (dry)**
- **Scissors**
- **Paints or coloured pencils**
- **Paper sheets and pencils for note-taking**
- **Magnifying glasses**
- **Water spray bottle**

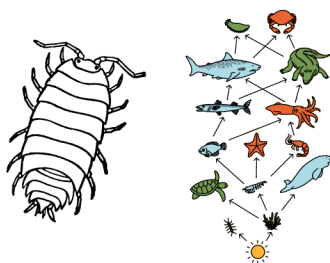


Biodiversity



Implementation of the Activity:

- **The students will be divided into small groups and provided with research materials such as books, articles, or internet access to investigate the abiotic and biotic factors of the woodlouse habitats. The students will be asked to identify and record relevant information, such as temperature,**
- **humidity, soil type, presence of other animals, and plants. Construction of the shelter near the garden and compost bin: After the research, in a large group setting, the construction of the shelter for the woodlouse near the school garden and compost bin or educational pond will be planned. The teacher will provide instructions and guidance for the shelter construction, encouraging the use of materials available in nature, such as wooden boards, cardboard, old tree leaves, among others.**
- **The students will work in groups to develop the shelter, taking into consideration the needs**
- **of the woodlouse in relation to the environment, such as humidity, temperature, and**
- **protection from frequently visited areas by students.**
- **For the construction, they will need to level the ground area where the “Woodlouse Refuge”**
- **will be placed. Then, a layer of dry leaves will be added, followed by a rectangle of cardboard**
- **(moistened with a water spray bottle) with the same area as the wooden board, which will**
- **ultimately be placed on top of the other two layers.**



Water



The aim of this activity:

Caring to preserve!

To understand what an unpolluted watercourse can offer us.

What do we need?:

Fishing costume, water analysis kit, shrimp net, thermometer, water collection tray, camera, magnifying glass, ruler, tape measure, stopwatch, identification sheets for macroinvertebrates and microorganisms, observation record sheets

Implementation of the Activity:

Along a stretch of river/stream, students will make different observations: identifying plants and animals in the river and on the banks; identifying possible domestic or industrial sewage connections directly to the watercourse; identifying the colour and odour of the water; identifying types of rubbish in the bed or on the banks. In a previously selected sector, they will measure and record the temperature and speed of the water, the flow of the river. They will also analyse the water to check its acidity, the presence of nitrites, nitrates and phosphates. Finally, they will take a sample of the bed near the bank to check for the presence of macroinvertebrates and microorganisms.

This activity should be carried out periodically.





Waste/Water/Sea

The aim of this activity:

To make students and the community conscious of the correct disposal of waste;

To clean up the banks of a river or a beach.

What do we need?:

Fishing costumes, gloves, rubbish bags, rubbish carrier and camera.

Drawing and painting materials, cardboard.

Implementation of the Activity:

Invite the community to join a campaign to clean up a nearby river or beach. Collect the waste found and sort, weigh and dispose it correctly.

Later, in the classroom, check the type of waste found and realise that waste thrown on the ground will enter watercourses as a result of wind and rain and from there end up in the sea, turning into microplastics and entering the food chain. Make posters/paintings around the gutters to raise awareness.



Ponds with life - a laboratory at our side at school.



The aim of this activity:



Recognise the importance of wetlands in maintaining biodiversity

What do we need?:

Old fabrics, waterproof mesh, shade netting, plants and animals for the pond, stones, water point. Garden and honey plants; protective objects.

Electronic magnifiers, film camera.

Implementation of the Activity:

Make a good choice of where to install the pond. Prepare the site by digging out the space. Once prepared, place old fabrics on the bottom to create a soft surface. Place the waterproof mesh and shade netting. Arrange the plants in the space and secure them with small stones. Fill the pond with water and place the animals.

Decorate and protect the space with plants and other objects. After the installation, make observations of the biodiversity that is developing in the pond using electronic magnifiers, film cameras...; record the species of birds and insects that have started to frequent the space attracted by the water and the presence of food.



Green or Not

Green or Not?

The aim of this activity:

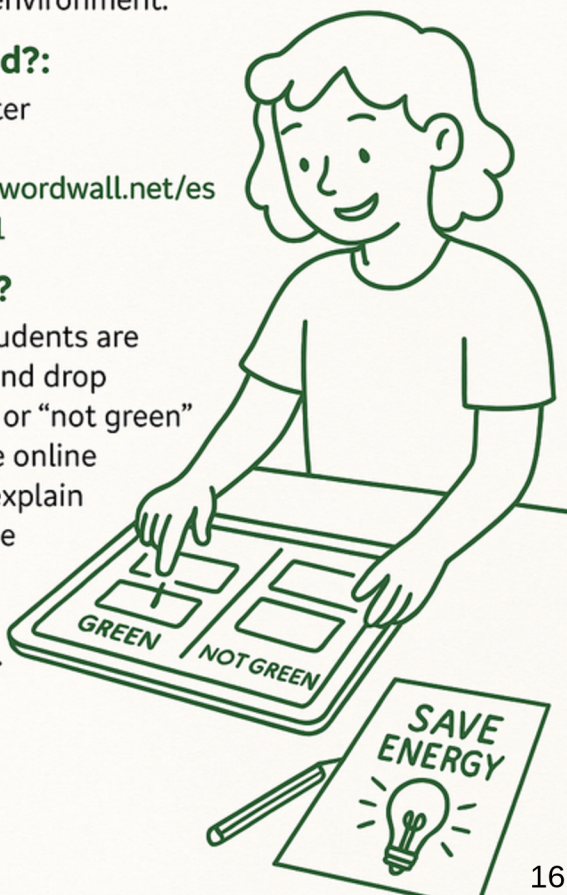
Through interactive exercises, group discussions, and critical thinking, we hope to assist students of all ages in identifying commonplace behaviours that either benefit or hurt the environment.

What do we need?:

- A tablet or computer
- Internet
- Game link: <https://wordwall.net/es/resource/92997431>

What will we do?

Teams or pairs of students are formed. They drag and drop actions into “green” or “not green” categories using the online activity. They then explain their decisions to the group after writing and drawing their own eco-tip posters.



I Do Good For Nature

I Do Good for Nature

The aim of this activity:

to promote introspection about one's own environmental practices and investigate how minor adjustments can have a significant influence.

What do we need?:

- Tablet or computer
- Internet
- Video: <https://www.youtube.com/watch?v=V0lQ3lj1l40>
- Quiz: <https://wordwall.net/resource/92998300>

What will we do?

Watch the video in segments and take a moment to consider the questions. After that, complete the interactive test. Every student records their eco-actions at home and at school in a one-week "Green Journal." As a class, discuss the findings.



Show Me Green

SHOW ME GREEN!

The aim of this activity: to highlight student-led projects in order to foster a culture of sharing and applauding environmentally friendly behaviour.

What do we need?:

- 
 Smartphone or tablet
- 
 Bulletin board, blog, or digital gallery



What will we do:

Students document their eco-actions using little films or photographs. These are shown in a digital presentation or put up on a classroom wall. Students describe what they did and why in brief captions.



My Dream Green World

MY DREAM GREEN WORLD

The aim of this activity: to empower kids to take charge of eco-friendly planning and to imaginatively imagine a sustainable world.



- Paper, markers, and recycled materials
- OR digital Padlet board: <https://padlet.com>

What will we do?

Students create the green city or universe of their dreams. Younger children can create vibrant drawings, while older pupils can create short novels, green inventions, or community plans. Every student presents a rule that protects nature in their ideal society.



Little Heroes of Nature

Little Heroes of Nature

The aim of this activity:

to enable every student to perceive themselves as constructive change agents in their local communities.

What do we need?:

- Drawing tools or digital creation tools
- Support from teacher or family

What will we do:

Every pupil creates their own eco-superhero. They give their hero a name, explain their abilities, and produce a picture or narrative. Younger children sketch and perform hero scenarios, while older kids create comic strips or short films.



Sustainable or Not!

The aim of this activity:

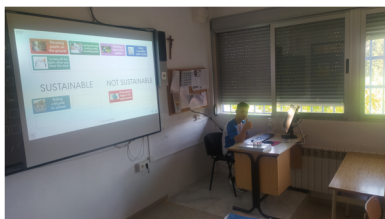
Distinguish between responsible ecological practices and those that are not.

What do we need?:

**We need an internet connection and an Android, iOS, or PC device to access the following website:
<https://wordwall.net/es/resource/92997431>**

Implementation of the Activity:

We will guide students to the website and show them how it works (drag and drop key ideas).



I know and practice it for the good of the environment

The aim of this activity:

Identify good ecological practices and motivate students to implement them in their daily lives.

What do we need?:

We need an internet connection and an Android, iOS, or PC device to access the following websites:

<https://www.youtube.com/watch?v=VOIQ3ljjl4Q> and

<https://wordwall.net/resource/92998300>

Implementation of the Activity:

First, a comprehension activity, watching and listening to a video on the "youtube.com" platform, and then, using the "wordwall" application, students answer a test.



I imagine my world

The aim of this activity:

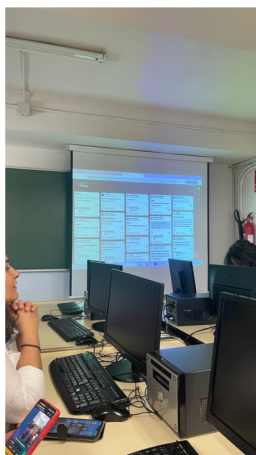
Empowering students' initiative and proactivity so they can propose an (alternative) reality where respect for the environment is a priority. It would be like setting a goal for society.

What do we need?:

We need an internet connection and an Android, iOS, or PC device to access the following websites: <https://padlet.com/> . Service registration is required.

Implementation of the Activity:

The application works as a creator of interactive and editable images, with an easy-to-use interface. Its use of vivid colors and clear shapes is particularly noteworthy.



I am ecological and I prove it

The aim of this activity:

Demonstrate that the ecological knowledge we receive in schools is put into practice, works, and serves as an example in our community. In our current image-driven society, it's necessary to show this, because otherwise, it seems like it doesn't exist.



What do we need?:

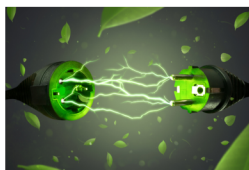
We need an internet connection and an Android, iOS, or PC device to access the following websites: <https://www.instagram.com/>. Service registration is required.

Implementation of the Activity:

On our Instagram profiles, we post photos of ourselves and our friends or family practicing eco-friendly practices such as recycling, water conservation, and energy saving. The important thing is to discuss these images in class periodically, suggesting challenges and new ideas to implement, and for the photos to continue growing to spark further debate.



android



I am a defender of Nature

The aim of this activity:

Involve students in the fight for a better environment in their community, promoting a cleaner school, neighborhood, and town.

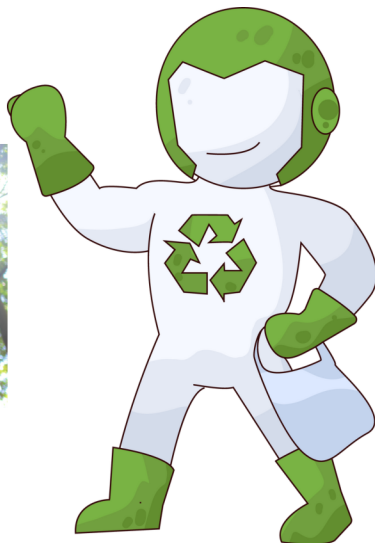


What do we need?:

We need an internet connection and an Android, iOS, or PC device to access the following websites: <https://www.instagram.com/> <https://www.tiktok.com/es/> <https://www.facebook.com/> <https://www.youtube.com/>. Service registration is required.

Implementation of the Activity:

It's a multi-level activity that can be practiced from a very young age until they graduate from school. They put themselves in the role of nature defenders, explaining to viewers of their photos or videos what can be done to combat climate change. You can simulate a movie, a teacher's class, or even create an eco-superhero. Many skills and many types would be developed. I think it's perhaps the most obvious activity that can be done with social media and the community.





SUSTAINABLE DEVELOPMENT GOALS

THE GLOBAL GOALS For Sustainable Development





Eco Friendly Childrens
2023-ES01-KA210-SCH-000151636



Project coordinator
Institucion Juan XXIII

Project partners

100.Yıl Akkent Primary School

ARDA Beratung & Bildung GmbH

Agrupamento de Escolas Dr.
Francisco Sanches



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Eco- Friendly Childrens



<http://ecofriendly-childrens.eu/>



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