EDUCATIONAL TOOLKIT

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INTRODUCTION

The development of this didactic guide responds to the pressing need to educate new generations about the vital importance of sustainable resource management, environmental preservation, and responsible waste handling. In today's global context, where environmental challenges are increasingly evident, it is essential to cultivate an active and responsible awareness from an early age, encouraging students to reflect on their daily habits and their impact on the planet.

Among the different types of waste generated in our society, plastics occupy a central place. Their versatility, durability, and low cost have led to massive use in countless everyday products, but these same properties also make them a major environmental challenge. Plastic waste takes hundreds of years to decompose, accumulates in ecosystems, and contributes significantly to pollution and climate change. Within this category, plastic toys represent an especially relevant example: millions of toys are discarded every year, despite being made of valuable materials that could be recycled and given a second life. Teaching children about the recycling of plastics through the objects most familiar to them — their toys — becomes a powerful and meaningful way to connect learning with their everyday reality.

Nevertheless, the guide does not limit itself exclusively to plastics. It also addresses recycling in a broader and more integrated sense, encompassing paper, cardboard, glass, metals, textiles, organic waste, and other materials. This comprehensive perspective highlights the importance of proper waste separation, the promotion of reuse, and the reduction of unnecessary consumption. By understanding the recycling cycle of different materials, students gain a holistic view of environmental responsibility and the contribution of each individual action to the collective good.

The didactic approach of the guide is designed not only to provide knowledge but also to engage students in an active and playful way. Through interactive workshops, board games, and hands-on activities, children experience the principles of recycling and the circular economy in practice. They discover how discarded materials can be transformed into new products, reducing the need for raw materials and minimizing environmental impact. In particular, activities linked to plastic recycling and the reuse of toys serve as an entry point for reflection on broader issues such as sustainability, consumption habits, and innovation in the use of resources.

Ultimately, the aim of this guide is to inspire a proactive and committed attitude among students, encouraging them to become agents of change in their families, schools, and communities. By combining the specific case of plastics and toys with the general principles of recycling and waste reduction, this guide contributes to the formation of environmentally conscious citizens, equipped with the knowledge, skills, and values needed to build a more sustainable future.

OBJECTIVES

- To raise awareness among pupils and citizens so that they acquire positive attitudes and behaviour towards respect and improvement of the environment, with special emphasis on respect for our town and its surroundings.
- To save natural resources and change consumption habits.
- Actively participate in improving the environment by collaborating in its maintenance.
- To encourage respect for natural and urban spaces and their surroundings.
- To get to know our immediate environment, its functions and services in order to make the most of the environmental resources that each place possesses and to turn our immediate surroundings into an environmental classroom.
- To learn to select and reduce the waste we generate in our daily lives, whether in schools, at home or in the street.
- Encourage the separation of organic waste in homes and improve the separation of organic waste in schools.

WORKSHOP SHEETS

TACTFUL RECYCLING

Age

+6 years old

Duration

30 minutes

Objectives

- Encourage recycling and visual skills in the relationship of recycling colours to the products to be discarded.
- To encourage cooperative work.
- To develop and encourage the ability to recycle and make quick decisions.

Materials

- Cardboard box
- Tissue
- 'Toys' or products/tokens for recycling
- Recycling containers
- Masks (optional)

Workshop development

Explanation (5 minutes):

The workshop will begin with a brief explanation of the different recycling bins, their use and which objects should be placed in them for the workshop to run smoothly.

Development of the activity (25 minutes):

The activity consists of organising each product in the container that corresponds to it by touching the object.

Recycling bins will be marked with different colours.

Before starting, each child will be given a mask to become the 'Superheroes/superheroines of recycling' that they can use throughout the workshop.

The objects will be hidden inside the cardboard box so that the children cannot see them. In turn, each child, blindfolded with a piece of paper between the mask and the eyes, will reach in and take an object out of the box. By touching, they have to find out what type of object the material is (organic,

plastic, cardboard, aluminium, etc.). Once they have given an answer, they remove the blindfold and have to recycle the object in the corresponding container.

If the product has been recycled correctly, 1 point is awarded. If the product has not been recycled correctly, no points are awarded (if after several rounds they are not able to recycle correctly, the other participants can help them to do so).

SCORES A RECYCLING TRIPLE

Age

+6 years old

Duration

30 minutes

Objectives

- To encourage recycling and psychomotor skills through throwing.
- To encourage cooperative work.
- To develop and encourage the ability to recycle and make quick decisions.

Materials

- Organic food (toys)
- Packaged food (toys)
- Recycling containers

Workshop development

In this activity, the children are divided into two teams: the recyclers of containers and the recyclers of organic waste. Each team receives 15 items representing different types of materials to be recycled. The goal is to shoot the items into the appropriate container from a set distance, similar to a basketball game. The recyclers of containers must shoot into the container for recyclables (such as plastics and metals), while the recyclers of organic waste must shoot into the container for organic waste (such as food scraps). Each valid shot earns a point for the team. The teams take turns until one of them has successfully shot all its items into the correct container. The first team to achieve this is the winner.

THE FIVE COLOURS OF RECYCLING

Age

+8 years old

Duration

30 minutes

Objectives

- Develops the memory and exercises the speed of reflexes.
- Encourage the acquisition of habits, related to recycling and encourages socialisation.

Materials

- Rubbish Race' board game

Workshop development

Explanation + practice game (15 minutes):

At the beginning of each workshop, it is important to remember the use and the objects to be disposed of in each recycling bin for an optimal development of the activity.

The workshop will begin with a brief explanation of the game using the instructions and, if necessary, a quick test game. (How to play (SP))

Development of the activity (15 minutes):

The activity consists of playing the board game so that they acquire notions about recycling.

We explain the dynamics of the game and the instructions. Given that the game has a very simple dynamic, if we accompany the explanation with the representation of the movements, we will ensure that the students understand the game. A review of the cards is recommended in order to become familiar with the objects and their indicated containers.

Rubbish Race is an educational game in which players must correctly sort different waste into the appropriate bins (yellow, blue, brown, green and grey) as quickly as possible. During the game, players compete to be the first to dispose of their waste cards correctly. The winner is the player who sorts all his waste before the others. It is a dynamic game that reinforces learning about recycling in a fun way.

PAINTING THE RECYCLING

Age

+3 years old

Duration

30 minutes

Objectives

- Encourage children to cooperate in handicrafts.
- To instil recycling values through play.
- Develop and encourage the ability to recycle and make quick decisions.
- Learning to separate waste
- To use waste bins correctly
- Expand basic vocabulary

Materials

- Drawings of objects to colour
- Recycling containers
- Cellophane
- Paints

Workshop development

In this activity, each child colours a different everyday object, such as a bottle, a piece of paper, or a can. Once the drawings are completed, the children take turns attaching their coloured illustrations to the corresponding recycling bin using adhesive tape. The drawings will stay on the bins, helping the next children who use the containers to know which items should be placed in each one. The purpose of this activity is to teach the children how to correctly separate waste into the appropriate recycling bins and to help other children by providing visual aids that guide them in recycling properly.

THE CITY OF MATERIALS

Age

+3 years old

Duration

20 minutes

Objectives

- Explore, discover, and become familiar with some common toy materials (rubber, bioplastic, plastic, wood, textiles, and wood).
- Explain how to properly recycle each type of material to reduce pollution.
- Promote environmental awareness and promote sustainable habits from childhood.
- Promote reflection on how toys affect the environment.

Materials

- A die with the 6 materials (wood, rubber, bioplastic, plastic, metal, textile)
- Different types of toys
- Interesting facts related to recycling

Workshop development

In this activity, we'll divide the group into two groups and take turns rolling the dice. The team on the right will start the game by rolling the die, which has a different material on each side. The team must identify a game or toy made with the material indicated by the die. If the answer is correct, the team will score a point. If they get it wrong, they lose their turn, and it will go to the opposing team. Each time a team gets it right; they will be rewarded with a fun recycling-related fact read aloud. The game will continue until all the materials included in the activity have been named. Finally, the team with the most points will be declared the winner.

At the end of the game, participants will be invited to reflect on the importance of recycling properly. They will be asked if they know the benefits of this practice, and based on their answers, they will be explained why it is essential to separate materials properly.

Participants will be highlighted as recycling properly facilitates the reuse of materials, allowing old toys to be transformed into new products instead of becoming polluting waste. Participants will also be reminded of the positive impact this action has on the environment, reducing waste accumulation and promoting more responsible and sustainable consumption. Some examples can be given, such as:

- Recycled plastic: It can be crushed and melted down to make new toys, street furniture, or packaging.
- Recycled metal: It can be reused to make tools, structures, or even parts for new games.
- Recycled wood: It can be converted into other wooden objects or into biomass to generate energy.
- Recycled textiles: They can be used to make new stuffed animals, eco-friendly bags, or filling materials.

Interesting facts related to recycling:

- Some landfills are so large they look like mountains.
- One piece of chewing gum takes 5 years to decompose. One plastic bottle takes 500 years to decompose.
- If you recycle 100 aluminum cans, the energy savings are proportional to three hours of television.
- There are underwater landfills full of garbage in the oceans.
- There are houses made of plastic bottles.
- In some countries, garbage is turned into roads.
- A glass bottle can be melted down and turned into another bottle many times without losing quality.

- One liter of used oil can pollute up to 1,000 liters of water each year; 1.3 billion tons of food are wasted worldwide.
- Bananas decompose in two weeks.
- One plastic bag takes up to 500 years.
- Some cities have machines that give you money or prizes for recycling bottles and cans.
- If we recycled all the paper we could, we could save more than 250 million trees each year.
- At least a third of the materials in landfills could be recycled.
- Wooden toys (unvarnished) take 10 to 15 years to decompose.
- Wooden toys (varnished) take more than 50 years to decompose.
- Slim and Modeling Clay take 50 to 100 years to decompose.
- Plastic toys take 100 to 1,000 years to decompose.
- Video game consoles take hundreds of years to decompose.
- Stuffed animals take 20 to 200 years to decompose.
- Rubber toys take 50 to 80 years to decompose.

THE TOY JOURNEY

Age

+3 years old

Duration

20 minutes

Objectives

- Encourage recycling and the use of recycled toys.
- To instil values of solidarity and environmental awareness through toys.
- To learn the process of recycling toys in an interactive and digital way.

Materials

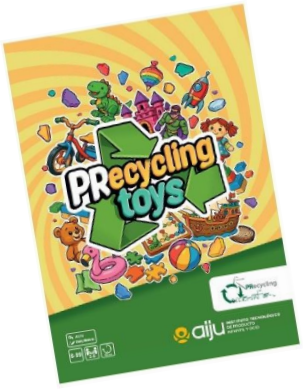
- Educational video "Recycling for Kids | Recycling Plastic, Glass and Paper | Recycle Symbol | Kids Academy"
- Educational video "ecoBirdy design furniture and recycling plastic toys"
- Educational video "How Old Toys Are Recycled Into Furniture"
- Broken toys (optional)
- Shredded plastic pieces from toys (optional)

Workshop development

The workshop begins with the explanation of the viewing of some very short videos that help to understand recycling in general and the recycling of toys. The educational video "Recycling for Kids | Recycling Plastic, Glass and Paper | Recycle Symbol | Kids Academy" is an interactive video about recycling containers, this way you can pause the video so that the students can interact and respond to what is being raised in the video. Once finished, the recycling cycle of a toy is explained in an educational way, using broken toys and pieces of shredded plastic. To do this, the educational video "ecoBirdy design furniture and recycling plastic toys" and the video "How Old Toys Are Recycled Into Furniture" show different fragments of recycling plastic toys to their subsequent manufacture into furniture or everyday objects.

This workshop focuses more on the interaction of children and the assimilation of the second life process of toys that are recycled.

PRECYCLING GAME



Age

+6 years old

Duration

30 minutes

Objectives

- Encourage recycling and the use of recycled toys through board games.
- Learn how to recycle toys and their life cycle to give them a second life.
- To learn about the different types of plastics that make up toys.

Materials

- "Precycling game" PDFs board game

Workshop development

In this activity, children play an educational card game where they collect recyclable materials to build new toys. Each player receives cards representing plastic pieces, materials, and actions, and their goal is to complete toys by gathering the correct components. During their turns, children can draw cards, use action cards to help themselves or sabotage others, and transform their collected pieces into finished toys to score points. The game teaches players about different types of plastics, the recycling process, and the concept of giving toys a second life. The purpose of this activity is to promote recycling awareness, strategic thinking, and teamwork in a fun and engaging way.