



Erasmus+



## *Strategic Partnership*

*"Researching from the school library  
to improve the environment"*

*This project has been funded with support from the European Commission.  
This publication [communication] reflects the views only of the author, and the Commission  
cannot be held responsible for any use which may be made of the information contained therein.*

# PROJECT DURATION:

- *2 years- from 2015 to 2017*

Researching from the school library to improve the environment”

# PARTNERS INVOLVED IN THE PROJECT

7 COUNTRIES

7 INSTITUTIONS

*Spain –project coordinator*



*Romania*



*Hungary*



*Italy*



*Croatia*



*Czech Republic*



*Turky*



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# OUR ACTIVITIES FOR THE YEAR 2015

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# *SEPTEMBER 2015*

*Erasmus Commission was established and it consists in the following members :*

- the headmaster of the institution,*
- one teacher responsible for the project (coordinator),*
- a member from the parents' comity ,*
- a member of the local community.*

*They will be in charge of carrying out the project in optimum conditions, as well as of implementing it at the school level and in the local community.*



*We have chose the mascot representative for our institution,  
which is a frog. Children made drawings with this frog which they  
called "OAKY."*



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OCTOBER 2015

*The teachers together with the preschoolers made the mascot (the frog) in 3D – and they placed it in each class library.*



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# *Erasmus corner in our kindergartens*



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*The launching of the project took place at the County Library "Panait Istrati" in Brăila, and preschoolers, teachers, parents and local representatives of the community attended it. The content of the project as well as a short artistic programme were held at this location. (the artistic programme consisted in poems, songs and dances about frogs and about the environmental protection).*



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# *Our show*



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# *Initial questionnaire about the ecosystem protection*

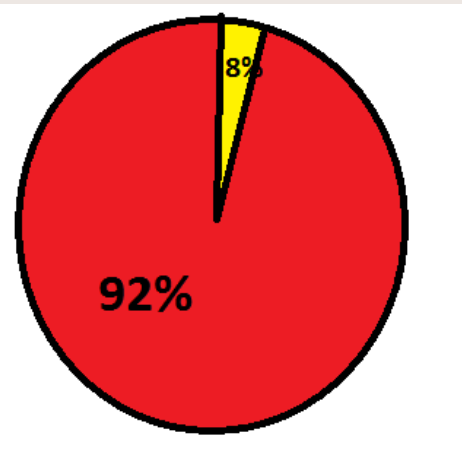
*The children under the guidance of teachers answered a set of questions related to the recognition of the creatures that live in different environments of life. For the first point A of the questionnaire, the preschoolers were given the task to name the animal that does not fit, at point B they had the task to name the creatures that live in the ocean, forest, farm.*

## *Results of initial questionnaire*

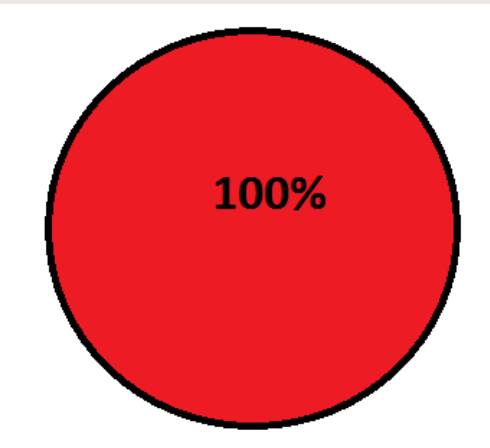
Total numer of students	A 1	A 2	A 3	A 4	A 5	B 1	B 2	B 3
GPP5/20	99%	100%	100%	100%	100%	90%	75%	70%
GPP2/15	86%	100%	93%	93%	100%	60%	86%	86%
GPP5/GPP2 35 sudents	92%	100%	96%	96%	100%	75%	80%	78%



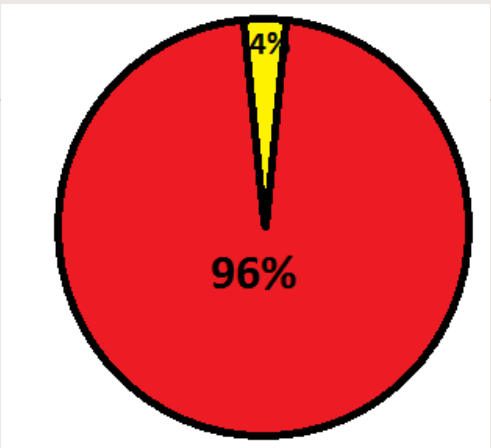
*Interpretation initial questionnaire about the ecosystem protection*



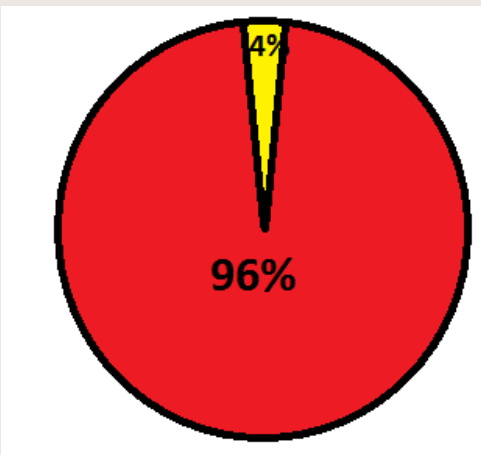
A1



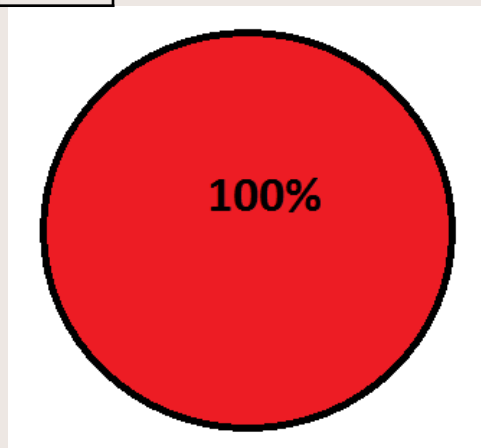
A2



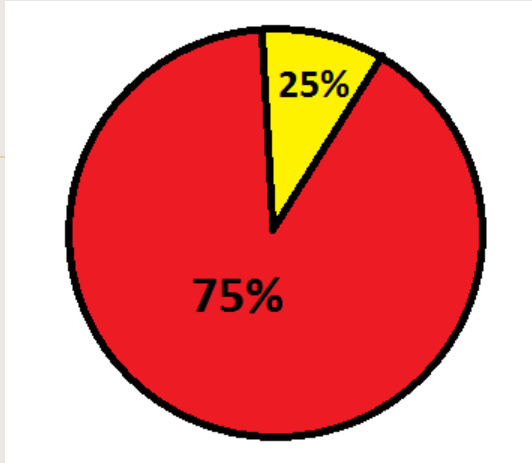
A3



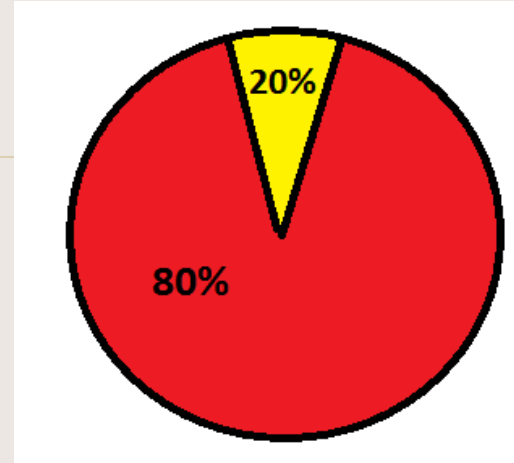
A4



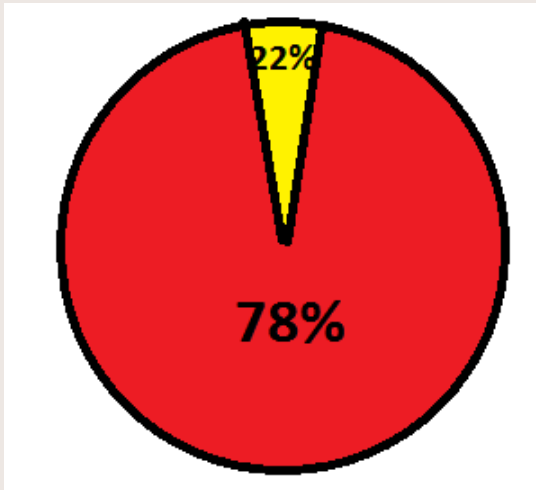
A5



**B1**



**B2**



**B3**

### Legend

■ -correct answers

■ - wrong answers

Number of children: 35

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NOVEMBER 2015

*The first transnational meeting of the project*

- Establishing the responsible teams for each workshop and of the secretaries who will write the minutes of the meetings;*
- Possible activity changes caused by changes in the budget;*
- Analysis of the project evaluation report made by the National Agency of Spain and finding activities to improve weaknesses in the original application;*
- Planning Project activities for the first year depending on the school calendar of each participating country;*
- Presenting the Project activities and setting the deadlines for achieving them;*
- Establishing the model certificate of participation;*
- Working on the logo of the project;*
- Evaluating the project meeting in Spain.*

# OFFICIAL OPENING



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## *Exchange mascots between partner countries*



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## *Visit to school "Santa Juliana" Granada*



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## *Visit of Granada City Hall*



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## *Working groups*



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# *In the school library*



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# *Bio garden*



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## *Documentation visit in Granada- Alhambra Palace and Generalife gardens*



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*DECEMBER 2015*

*Sending greeting postcards to children in partner countries*



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A silver metal spiral binding is visible along the left edge of the notebook page.

# *OUR ACTIVITIES FOR THE YEAR 2016*

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*JANUARY 2016*  
*Wetland ecosystem*

*Preschoolers together with the teachers visited the Museum of Natural Sciences in Braila where they observed the difference between some ecosystems : pond ecosystems, lowland/field, forest.*

*This activity was used as a starting point for achieving the WETLAND ECOSYSTEM.*



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*Preschoolers and teachers have made the necessary elements in 3D ecosystem - animals and plants. They used both natural materials - reeds, rushes, seeds—but also recyclable materials such as paper, cardboard and plastic containers. Children have combined elements thus creating a model for the original wetland ecosystem.*







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# The leaflet



2015-2016

## Workshop Protected ecosystem WETLAND ECOSYSTEM BRAILA/RO

Hello, I am **Oaky** frog, the mascot of Romanian students from Kindergarten no.2 and I would like to present you the place where I am living, wetland ecosystem. Please, come and join me.

### DEFINITION

A wetland is "an ecosystem that arises when inundation by water produces soils dominated by anaerobic processes, which, in turn, forces the biota, particularly rooted plants, to adapt to flooding." There are more main kinds of wetlands – marsh, swamp, bog, fen.

Now I will tell you more details about my living place.

### The Small Wetland of Braila

It is the last remaining part of the former wetlands of Braila. Covering a 241 km<sup>2</sup> area, The Natural Park preserves 10 % of the former interior Danube Delta, the former wetlands of Braila and Ialomitia counties. The Natural Park Small Wetland of Braila covers 62 km, on the lower Danube at flood peak. It is home to a rich fauna and flora biodiversity, an extensive part of which are protected by national and international laws.



### YOU KNEW THAT?

\*Wetlands prevent flooding by holding water much like a sponge. By doing so, wetlands help keep river levels normal and filter and purify the surface water.

\*Wetlands accept water during storms and whenever water levels are high. When water levels are low, wetlands slowly release water.

\*Wetlands also release vegetative matter into rivers, which helps feed fish in the rivers.

\*Wetlands help to counter balance the human effect on rivers by rejuvenating them and surrounding ecosystems.

Many animals that live in other habitats use wetlands for migration or reproduction.

\*While wetlands are truly unique, they must not be thought of as isolated and independent habitat. To the contrary, wetlands are vital to the health of other biomes and to wildlife and humans everywhere.

\*Unlike most other habitats, wetlands directly improve other ecosystems.

\*Because of its many cleansing benefits, wetlands have been compared to kidneys. The analogy is good one. Wetlands and kidneys both help control water flow and cleanse the system.

\*The ability of wetlands to recycle nutrients makes them critical in the overall functioning of earth. No other ecosystem is as productive, nor as unique in this conversion process.





## FLORA

Submerged wetland vegetation can grow in fresh-water conditions. Some species have underwater flowers, while others have long stems to allow the flowers to reach the surface. On the banks appears sedges, reeds, reeds and rushes, and in the middle of the water are plants with floating leaves like white and yellow water lily.

Submerged species provide a food source for native fauna, habitat for invertebrates, and also possess filtration capabilities.

Algae are diverse water plants that can vary in size, color, and shape. Algae occur naturally in habitats such as inland lakes, and damp soil and provide a dedicated food source for animals, fish, and invertebrates. Plankton are algae which are microscopic, free-floating algae. This algae is so tiny that on average, if fifty of these microscopic algae were lined up end-to-end, it would only measure one millimetre.

## FAUNA

Insects and invertebrates can be submerged in the water or soil, on the surface, and in the atmosphere.

Fish are more dependent on wetland ecosystems than any other type of habitat (carp, rudd, perch, pike, catfish)

Amphibians such as frogs need both terrestrial and aquatic habitats in which to reproduce and feed. Reptiles, snakes, lizards and turtles also can be seen throughout wetlands.

There are 207 bird species find refuge here for nesting, food or resting throughout the migration periods (wild duck, heron, crane, stork, egret, pewit).

Mammals include numerous species of small mammals (fox, wild cat, hare, otter, ferret) in addition to large herbivorous and apex species such as the beaver, swamp rabbit. The wetland ecosystem attracts mammals due to its prominent seed and vegetation sources, abundant populations of invertebrates, small reptiles and amphibians.



## BIOTA

The biota of a wetland system includes its vegetation zones and structure as well as animal populations.

The most important factor affecting the biota is the duration of flooding. Other important factors include fertility.

In fens, species are highly dependent on water chemistry. The chemistry of water flowing into wetlands depends on the source of water and the geological material in which it flows through as well as the nutrients discharged from organic matter in the soils and plants at higher elevations in slope wetlands. Biota may vary within a wetland due to season or recent flood regimes.

## KEY WORDS

**Anaerobic** involving, or requiring an absence of free oxygen.

**Biota** is the animal and plant life of a particular region, or habitat.

**Plankton** are algae which are microscopic, free-floating algae.

**Trophic network** is a whole trophic food chains in an ecosystem.





# Poster

## Wetland ecosystem

- *Preschoolers created a poster by combining different techniques- painting – for the 'wetland rawing-' plants' and creatures, gluing - images of living creatures.*





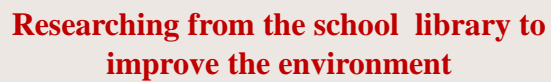
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# *The Game*

- *Preschoolers under the guidance of teachers searched information necessary for the game , pictures about protecting the wetland ecosystem and images that describe ways of polluting the ecosystem. They collected plastic stoppers of different colors - red, yellow, blue, green from plastic bottles. They participated in setting the rules of the game, contributing with personal ideas.*
- *And this is what came out of combining information collected from children with those from the teachers – a game board to protect the wetland ecosystem “ECO KIDS”.*



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# *ECO KIDS*

## *Game description*

*Hi, I'm Oaky frog, children's mascot from Kindergarten No. 2 Braila and I want to introduce*

*you the game Eco Kids*

***Elements of the game:** a board game, four plastic caps of different colours, a die.*

***Number of players :** 2, 3 or 4*

***Aim :** Awareness of the need to protect the ecosystem pond by following the route of the "Start" in the middle of the "Wetland ecosystem."*

## *Objectives :*

- ☐ *recognize and describe the images that represent aspects of protection or pollution;*
- ☐ *distinguish between pollution actions and protect water actions*
- ☐ *respect the rules of the game*
- ☐ *participate actively at the game observing the order crossing of the trail*

## *Players order:*

*It begins the player that throw the die with the highest number of points.*

.

### *The rules :*

*Each player chooses a plastic cap, which he lays it in the circle of the same colour at the „Start“ point.*

*The players throw by turns the die, just once, and they begin in descending order according to the number of points.*

*They proceed with a number of steps equal to the value of number of points from the die.*

*If a player reaches a box occupied by another player, the first proceeds and the other stays on his place.*

*If a player reaches at a box with a picture specifically for the ecosystem protection or pollution, he can only continue the game after he describes that picture and specify how it was done (for example If he reaches the position number 10 he describes and identifies the actions -*

*In this image the child cleans water, he helps by protecting the ecosystem. This is a good thing. If he reaches the position number 5 he describes and identifies the actions. In this image the water is full of dead fish from pollution. This is a negative aspect.)*

*Other playing partners validate/invalidate the answer. If the player does not properly describe the image he will stay a ride on the position reached.*

*If the player reaches the white lily box he proceeds three boxes.*

*If the player reaches the violet lily box, he turns back three boxes.*

*If the player reaches the yellow lily box, he stays a rook.*

*If the player reaches the frog box, it allows arriving directly the pond ecosystem, assuring him the winning of the game.*

*The arrival at the ecosystem supposes the throwing of the die that allows it the placement right there.*

*If the throwing die is higher, the additional steps will be executed back. The player is allowed three attempts*

*The first who arrives at the ecosystem will be an ECO CHILD; he will receive the cardboard with the corresponding number in the arrival order.*

*The other kids continue, until it remains one child, setting the ranking*



*Playing the game we have fun*



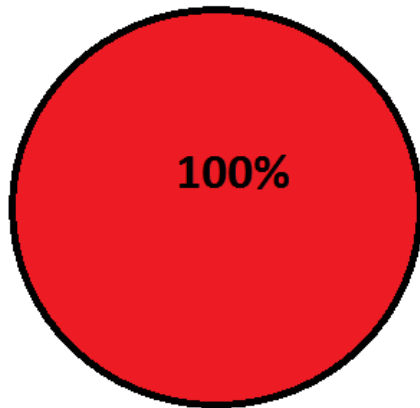
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## *Final questionnaire about protecting ecosystems*

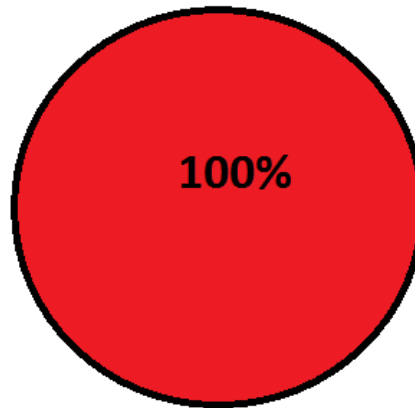
*After carrying out the activities related to the protection of ecosystems, the same questionnaire was applied, this time a visible progress in solving the tasks being remarked at the preschoolers.*

NUMBER OF CHILDREN	A 1	A 2	A 3	A 4	A 5	B 1	B 2	B 3
GPP5/20	100%	100%	100%	100%	100%	100%	100%	100%
GPP2/15	100%	100%	100%	100%	100%	86%	86%	93%
GPP5/GPP2 35 CHILDREN	100%	100%	100%	100%	100%	93%	93%	97%

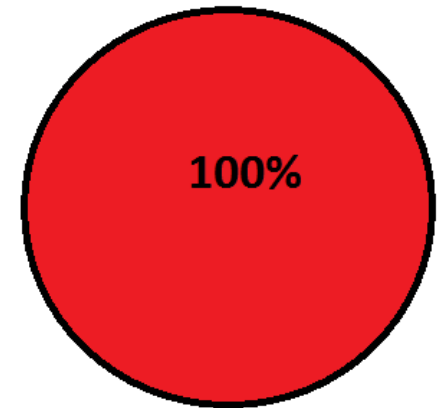
*Interpretation of the final questionnaire  
(registration progress)*



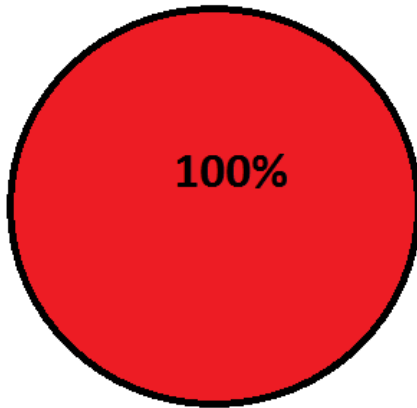
A1



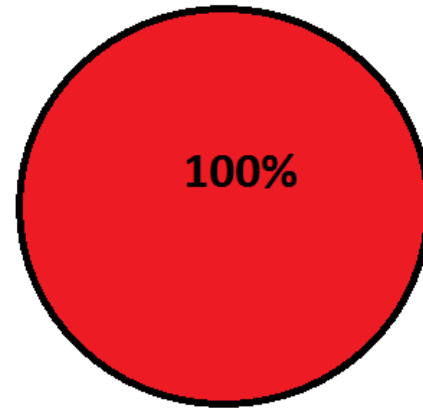
A2



A3



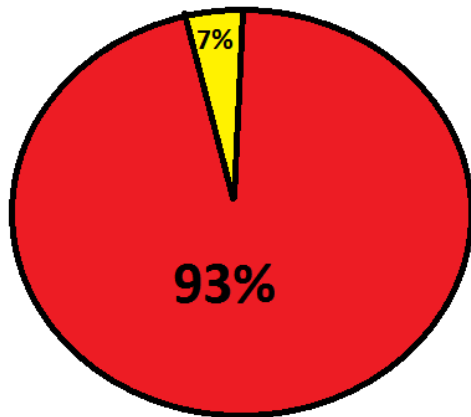
A4



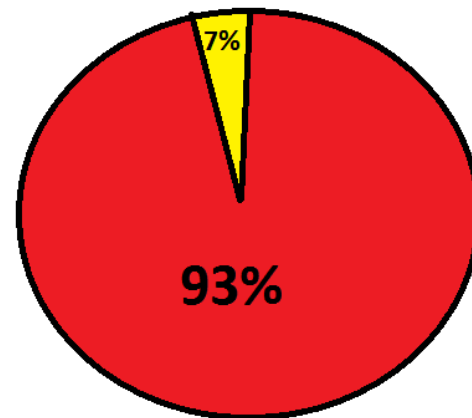
A5

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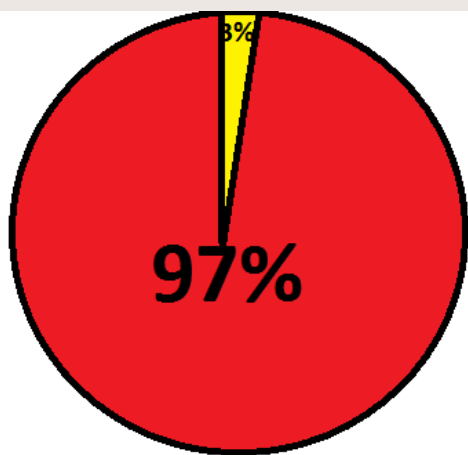




B1



B2



B3

#### Legend

■ -correct answers

■ - wrong answers

Number of children: 35

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*Thanks for your attention!*



*We are waiting you in Brăila , in May 2016,  
for the next workshop on recycling .*

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