

# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION



## **GUIDE AND PRACTICAL TOOLS**

### ***Implementation “Plastic Awareness” in Classroom***



## ***Intellectual Output 4***



This document represents the result of the Intellectual Output number 4 in the ERASMUS+ Project n°: 2020-1-SI01-KA201-075895 „**Innovative learning methodologies in schools for strengthening the awareness and active citizenship about plastics consumption - ReLearn Plastics**“.

**This work has been coordinated by E-gimnazija Serbia and was done together in collaboration with all the other partners of ReLearn Plastics: Faculty of Organizational Sciences, Biotehniški center Naklo, Youth club of the municipality of Stara Pazova – OKOSP, Asociacio Cultural CRESOL, IES Cid Campeador, CSI Centre for Social Innovation LTD and P.G.M.S. (Private Grammar & Modern School).**

The topic of plastic overuse and environmental impact is one of the most pressing issues of today. As much as it is talked about, it is evident that high school students still lack awareness of the problem we are facing, so they need this Intellectual output as it has been concluded in the needs analysis with the schools in the partnership.

This Intellectual Output consists of a guide for teachers with tools for working with students in the classroom, with the objective of using the new knowledge acquired with the IO1 and IO2. The objective of this IO4 is **clearly focused on students**. The aim is students can increase their awareness iplasticcs challenges and at the same time increase key competences using art-based learning activities.

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*„The world is changed by your example, not by your opinion.”*

*Paulo Coelho*



# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

## I INTRODUCTION

The intellectual output contains 3 main parts:

### **1. Methodology of implementation.**

First, the output contains a description about how to prepare the students in the classroom. How to involve and motivate the students and what the expected results of this preparation are.

### **2. Tools of implementation.**

It describes the tools for implementation. With these tools teachers will increase the awareness of students about plastics challenges. Some of the specific ideas for the tools are:

- Exercises to use plastics as an art element and create and find artistic works with plastics.
- Short guide for using drama to show and represent plastics challenges.
- Story telling as tool for talk about plastics challenges.
- Short guide to create a performance to show and represent plastic challenges.

Each Secondary School was in charge of developing two tools to work with the students, so finally the IO was created by 8 tools.

### **3. Examples of implementation and assessment.**

This part gives some examples for future implementation. The examples are based in the completion of the experiences in the 4 school centers. It contains description, pictures and evaluation opinions from teachers and students.

The creation of this IO started to be planned in the LTTA1, where teachers adapt all the new knowledge from a pedagogical point of view. So, they were able to create a toolkit to implement the knowledge in the classroom using art-based learning methodologies. Also, during the LTTA



teacher discussed about what kind of tools are the best options and they decide what exactly to do and how to share the tasks.

Each chapter will be organized by the work of each school – partner of the project.



# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

*“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has.”*

*Margaret Mead*

## II METHODOLOGY OF IMPLEMENTATION

- **E-GIMNAZIJA SERBIA**

Pupils from the first to the fourth class were chosen to participate in our Relearn Plastic projects. Depending on the lesson through which the activity was realised different preparations were done.



Pupils made a video presentation about the harm and problem of waste plastic, PET packaging. The presentation was shown in the school halls, so that all pupils, employees, and visitors of the school could see it.

Chemistry, Biology as well as Health and Sport teachers in their subject classes upgraded and instructed pupils about the harmfulness of waste plastic, raising awareness of the importance of reusing plastic materials and the negative consequences for the environment due to the disposal of this waste in landfills. Raising awareness about recycling among pupils through discussions in the classes can indirectly influence the development of awareness about the importance of recycling among their family members, classmates, friends, colleagues, and neighbors.



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PET packaging collection activities took place in the school grounds, in the school yard, in the premises of the Traffic High School, with which our school shares the building and yard (partner school in waste collection). We all collected it, both pupils and employees and guests of the school. Waste collection was collected in boxes decorated with engaging slogans and motives important for raising awareness of the importance of recycling. The pupils brought the collected PET packaging from home and put it in boxes.



- **PGMS Cyprus**

- **Student Preparation**

Various student groups were chosen to participate in our Relearn Plastic projects. Depending on the group or the lesson through which the activity was to take place different preparation was done.

Below we provide the common practice for most students participating in the projects.

A **presentation** was done in class with Plastic Pollution topic and more specifically the pollution of the oceans from plastics and its impact on sea life, and further down the line our own life.

**Discussion** in class then followed the presentation around the problems created by plastics (and not just in the oceans) and brainstorming on ways to help based on Reducing and Reusing concept.

The **docuseries - History 101 – Plastics (Season 1 – episode 4)**<sup>1</sup> short episode was shown in class (while for others it was given as a *homework*). The choice of this video was made based on its unbiased views. It presents both the benefits and drawbacks of plastic which reflects reality. Many are the cases where our livelihood depends on plastics and this is something that students are aware of as well. We asked students to reflect on it and realise that when we refer to raising awareness for plastic pollution we are not asking for the impossible, that is, “*The termination of plastic in our lives*”, but we are looking for ways to reduce – reuse – recycle and as they have seen through the documentary find/invent new solutions.

**Green Dot Representative** -The director of Green Dot<sup>2</sup> (Non-profit organization for plastic collection) visited our school to make the school more plastic-recycle friendly and identify the problems with existing collection/recycling process. During his visit a list was made of what is recyclable and what is not and placed the items in 2 different containers. The items were then taken out of the containers and students were asked to divide the plastic items between the 2 containers, recyclable and non-recyclable. Through this activity students realised that even though they thought they were recycling some of them didn’t really recycle the correct materials.

- **Student Involvement**

To get students to enjoy and work with their heart on something you need to make them feel like it’s their own. In both projects even though the idea was already there (what we were planning to do) we got the students to brainstorm and share their own ideas. We together decided the types of plastic instruments that we were going to create and the materials that we would need. Students decided between them who would bring what and who would create what.

<sup>11</sup> <https://www.imdb.com/title/tt12375356/>

<sup>2</sup> <https://greendot.com.cy/en/>

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Plastic containers were gathered by students, brought from home or from school. Some applies to music and dance students as the performance is something that they create entirely on their own (the talent show is each group's/ student's choice of what to do and not determined by the school). Their song their tunes and their moves (with the guidance and help of their music and dance teacher)

### **Student Motivation**

Working with teenagers for so long we came to see that a very good incentive and good motivation for them is to see their work receiving recognition and credit. For both tools developed, we decided that it would not just be an activity that it would be just for them to do, but something that they could show to the world, and of course in this way raising awareness on plastic pollution, as it is our prime goal. Posters comic strips as well as musical instruments are to be exhibited during the science fair planned on December 6<sup>th</sup> in our school, where they will have their work presented to other students and other stakeholders among them GreenDot. The musical instruments will also be used during the dance performance which will be presented at the school Talent Show which will take place in April 2023.



- **IES CID Campeador Spain**

Motivation is an essential part of successful learning. We assume that motivation leads to success, but it is equally plausible that successful learning produces motivation. Motivation may be built by catering for the needs of the group and making activities that are relevant and interesting for the students. We have selected four different cross-curricular activities which are aimed at:

- raising awareness of how much plastic we use and its consequences
- motivating and involving students to develop related projects in the classroom

### **Activity 1- Plastic around us**

This activity raises awareness of how much unnecessary plastic is used in packaging and asks students to look at alternatives.

The activity consists of undertaking an out-of-class project involving taking and captioning photographs. This activity is based on photographs taken by the students in the surroundings of the school, the playground, local parks or the local supermarkets. The photos taken by the students are shared on the social media to be used as a springboard for discussion and project work with students. As well as offering a great context for talking about issues surrounding plastic waste. As a follow-up activity, students can be challenged to shop without buying anything in plastic packaging during a week.

### **Activity 2- Plastic watchers**

This activity follows the peer to peer methodology. A group of volunteer students will act as the playground plastic watchers once a week. Their role will be going around and pointing out to their peers ways to reduce the plastic they use to carry their snacks. They will also remind them to throw plastic waste into the recycling bin. In order to make it official, the plastic watchers would wear a badge designed by the school.

### **Activity 3- Motivating video + posters**

All the students will watch the video <https://learnenglishteens.britishcouncil.org/study-break/video-zone/plastic-ocean> and do the activities on the website in the English class.

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After the activities, every class will design an inspiring slogan for the door of the classroom. This will create motivating mottos to raise awareness about plastics that all the school could enjoy.

## **Activity 4- Interdisciplinary Project in the area of Technology and art**

The curriculum of the school subject called Interdisciplinary Project has been designed to raise awareness about the need to take care of the environment. It deals with climate change, recycling, environmental challenges in underdeveloped countries for two hours a week. The students design posters about recycling and build agamógraphs.

## **Activity 5- Participating in a local beach clean-up**

In collaboration with a local NGO, students take part in a beach clean-up day



- **BC NAKLO Slovenia**

**Brainstorming:**

The teacher presents the project ReLearn Plastics and encourages students to suggest activities.

**Research & planning:**

The students plan their activities, conduct on-line research on the chosen aspect of the topic, get in touch with other potential participants/partners/stakeholders (at school/institution, in the local community). The teacher acts as facilitator.

**Conducting activities:**


The students work in groups to conduct the activity they have chosen (write a petition, send letters/e-mails, prepare content & design for posters, make a list of NY resolutions & collect reports, create art, prepare for & conduct fieldwork, work on final outcomes of activities (written contributions for school magazine, photos, illustrations). The teacher acts as facilitator.

**Outcomes:**


Exhibition, posters, artworks, magazine.

**The teacher's role:**

From the beginning, the teacher strives to actively engage the students in the project activities. Both theory and experience suggest that students are most motivated in taking part in activities that they have chosen themselves, i. e. that they find relevant to them at a particular time. The teacher provides 'scaffolding' in the sense that they attempt to organize the activities into a coherent whole, facilitate active engagement of *all* students (assign/change/expand/narrow down individual students' roles if necessary), insist on the goals and methods (social learning, team-work, outcomes, timeline ...) as well as the content and language standards.

 How you involve students in different activities in classroom?

Through constant monitoring the teacher makes sure each student has an appropriate role that they are capable of acting out, that the goals are being pursued, the timeline followed, and that the teamwork is being conducted efficiently. In case groups are experiencing difficulties, the teacher makes adjustments in agreement with students.

 How you motivate students for different activities in classroom?

Mostly by allowing students choice of activity, group, methods and outcomes but also by pointing out what has been achieved and suggesting alternative routes if necessary (loss of motivation, obstacles).

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*“There is no such thing as ‘away’. When we throw anything away, it must go somewhere.”*

*Annie Leonard*

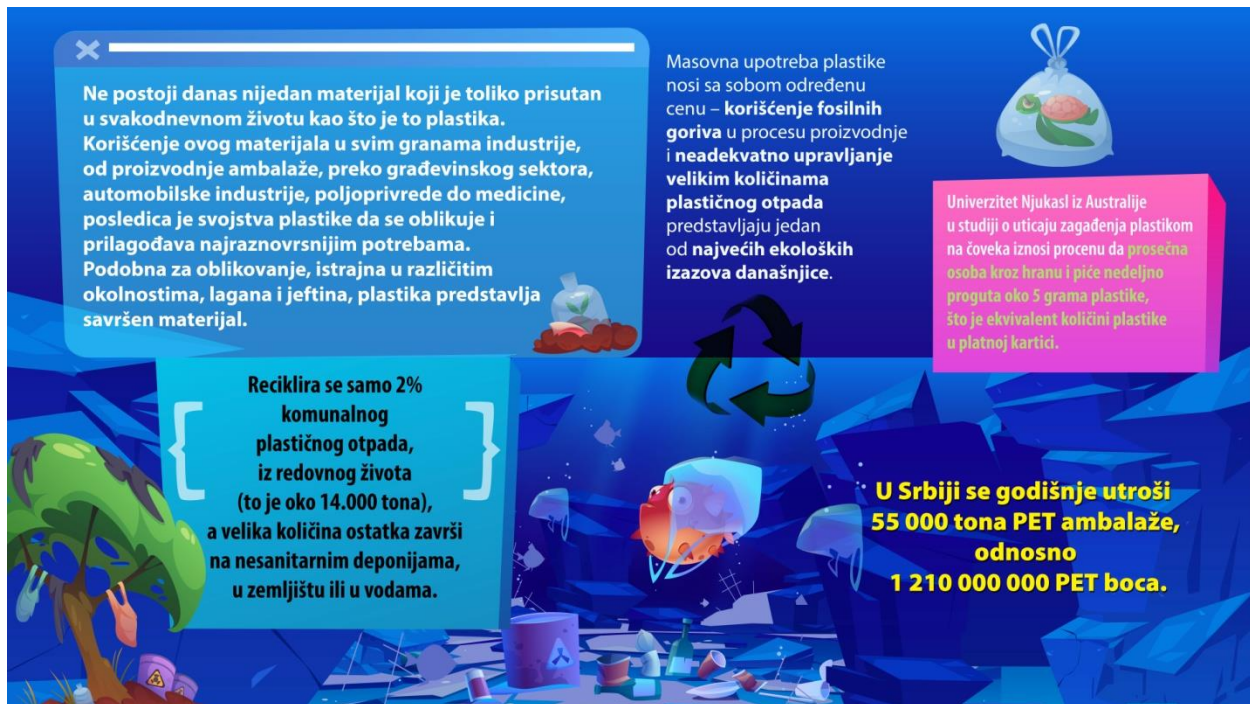
### III TOOLS OF IMPLEMENTATION

- **E-GIMNAZIJA SERBIA**

We chose 2 different types of tools. The first one revolved around the creation of art using computers, digital art, while the second tool is a creative design of boxes for recycling.

#### **Digital Art**

The first tool revolves around digital art and design imagery, more specifically presentations. Students got to work on their computers in pairs or groups to create a video presentation related to the plastic, its influence and impact on people’s lives, the harm and problem of waste plastic, PET packaging.





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## ■ Design of recycling boxes



We made the boxes in the classroom and the pupils from the first till the fourth grade of the Grammar school participated in that. Six pupils participated and we, as the project coordinators. We used cardboard boxes from waste packaging intended for different purposes in the school.

We designed the boxes to be noticeable and pointed out that they are intended exclusively for PET packaging, so that there is no mixing of waste (organic or any other than PET).



The action of collecting PET packaging lasted for 3 months (from April to the end of the school year in June). We will repeat this action during the school year and in the future, we will keep this form of raising awareness about recycling and educating pupils. The activity proved to be well received by the pupils.

We collected 13 sacks of 120 l each. The purchase of the collected waste turned out to be a problem for us because the buyers did not want to come and collect the PET packaging without weight of 1T.

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- **PGMS Cyprus**

As a Microsoft Show school as well as a school that promotes cultural events with a strong background in dance choir and orchestra, we chose the 'creation' of 2 different types of tools. One revolved around the creation of art through the use of computers, *digital art*, while the second tool is a dance performance of a song written for this show while some of the instruments to be used are created from plastics.

### **Tool 1 Digital Art and Design**

The first tool revolves around digital art and design imagery, more specifically Posters & Comics. Students got to work on their computers in pairs to create either a Comic Strip or a Poster. The application/website used to create either of the 2 is Canva<sup>3</sup>. Alternatively, Pixton<sup>4</sup> can be used for the creation of the comic strip.

Students were allowed to choose between the creation of a poster and the comic strip.

### **Comic Strip /Poster**

Once students were introduced to the subject and after the class presentations and discussion the first task was introduced to them - The creation of Comics or a Poster using Canva.

**Time assigned for the poster/ comic strip creation:** 2 teaching periods (+ 1 period to explain the tools)

Process:

1. **Presentation on plastics and task**

This presentation brings the subject already discussed in class and includes the process and a how to of creating the comic strip. For example, explaining what is expected to go into a comic. (i.e. the text must be short sentences, there needs to be a sequence of events etc.)

The following was explained to all students whether they would choose to create a poster or a comic strip, however this is the process to be followed for the creation of the comic.

2. **Creation of a script**

Each student had to first write down the script which they would follow in the comic. Apart from the elements described below the script includes a small paragraph of what the comic is about. In the script the following was identified.

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<sup>3</sup> [www.canva.com](http://www.canva.com) Canva is a tool which can be used to create various digital designs from invitations to posters to comic strips and it can easily be used in the classroom with collaboration possibilities. Basic usage is free while with a more advanced versions is available with a paid subscription.

<sup>4</sup> [www.pixton.com](http://www.pixton.com) Pixton is a tool which is primarily used for creation of comic strips. Basic usage is free while with a more advanced versions is available with a paid subscription.

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- a. Heroes
- b. Action
- c. Dialogues between the heroes
- d. Scenes

The different scenes that will be taking place and essentially each of their comic panels. (Each scene can stretch over more than one panel)

### 3. **Creation of a storyboard**

Once the script, heroes, action, and scenes were identified students had to create storyboards on a paper.

4. **Creation of the Comic Strip or a Poster on Canva.** Canva is an easy to use/ intuitive tool however a lesson was devoted to show and explain how students could use Canva to create the comic strip

Students got to work in pairs and each pair chose whether they would create a poster or a comic strip.

The posters and comic-strips created were presented in class but are to be part of a fair (Science Fair) to be held at school where students will get to present their work.

### **Tool 2 – Creation of Musical Instruments from Plastic as part of a Dance performance**

The second tool is entirely based on performing arts and therefore we get to work with different student groups. The end-result is a dance show which is a “work in progress” as the students will get to present the show during our annual talent show that takes place in April 2023 but we have already worked with some of them on the first step of the task which is the creation of musical instruments using plastic material as a base.

The group of students chosen for this one was, students participating in our dance and music clubs, as well as art and music students for the creation of the instruments.

1. A presentation was done in the classes with the purpose of raising awareness to the plastic pollution issue and putting the students in the right mindset.
2. Students were asked to view the Video – Docuseries (explained in the section above) on Plastics at home.
3. The students were then shown STOMP<sup>5</sup> videos to get them worked up and see how we could use plastic materials as part of our orchestra and as part of the show.
4. The idea of the show was then presented to them - A musical / dance performance to raise awareness of plastic pollution using musical instruments created from plastic

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<sup>5</sup> [https://www.youtube.com/watch?v=5WJ4kBOIXH4&ab\\_channel=StompOnline](https://www.youtube.com/watch?v=5WJ4kBOIXH4&ab_channel=StompOnline)



materials. This is where students were invited to share their own ideas of how we could succeed.

5. Students were then given the plan of how the process would be and we started off with the creation of the musical instruments.
6. Students that would work on the musical instruments were invited to brainstorm and research on different instruments that they could create using plastic material.

**Time assigned for the creation of the musical instruments:** 2 teaching periods

a. Creation of Musical Instruments

Our number one task was the gathering of material to create our instruments. Students were asked to bring the material from home while some of them (like dry food) were provided from us)

- i. Plastic bottles of different sizes (to create percussions)
  - ii. Big plastic water bottles (to create drums)
  - iii. Long Plastic Tubes (Provided by school – To create a kind of drum 😊)
  - iv. Old Plastic Mats (to use instead of sticks for our unique drum as well as for putting the drum together)
  - v. Things to be placed inside the bottles
    1. Buttons
    2. Beads
    3. Dry Food
      - a. Rice
      - b. Lentils
      - c. Pasta of different sizes
      - d. Nuts
    4. Scissors
    5. Glue Gun
    6. Plastic and Paper Tape
    7. Funnel
    8. Acrylic paints
    9. Paint Sprays
  - vi. The plastic containers were then washed disinfected and dried
  - vii. Each student / group chose the instrument that they were to create choosing different material for different types of sound (High/low etc)
  - viii. Once the instruments were created, they were then painted using both acrylic paints and paint sprays.
- b. The instruments were then given to our music teacher and orchestra students where they are in the process of writing a short song making use of the instruments created.
- c. Once the song is finalised it then passes to our dance club where the dance students will prepare their dance performance.

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- IES CID Campeador

## TOOL 1

### LESSON PLAN:

#### *USING ART AS A TOOL TO WORK ON THE PROBLEM OF PLASTICS*

### PROJECT

- TO DESIGN AND BUILD A “FALLA” AS A WAY TO CREATE AWARENESS ABOUT PLASTICS CONSUMPTION

### AIMS

- To undertake a project involving the use of ART to reflect on the amount of plastic we use
- To understand the meaning of a Valencian tradition.
- To raise intercultural awareness
- To practice written and visual comprehension
- To work on an artistic project based on volume and space
- To plan a project, get to know the different steps and procedures
- To produce written texts to accompany images based on a specific topic

### LEVEL

- Secondary (lower or upper)

### TIME

- 2 hours for preparation activities
- Give approximately 20 hours to design and construct the monument (Falla)

### MATERIALS

- Worksheets with background information and activities
- Images and videos from provided links

- Wood, paint, paper, cardboard and recycled plastic

## INTRODUCTION

A “falla” is a ephemeral artistic monument which is meant to be burnt. They are made during the traditional festivities that take place in Valencia, Spain in the month of March. They combine art and social satire or social denounce. We suggest using this tool in the Art classes in schools as an enjoyable project that can raise awareness about plastic consumption in our society.

## PROCEDURE

<p><b>1. Lead-in</b> ( 15 minutes)</p>	<ol style="list-style-type: none"> <li>1. Students brainstorm ideas about cultural celebrations that they know of – give descriptions about the celebrations (<i>what happens, who takes part, when, where etc</i>)</li> <li>2. Shown images of Fallas (<a href="http://www.fallas.com">www.fallas.com</a>) students try to come up with as much info as they can from the images alone (<i>what is it? where is it? what is it for?</i>) You can choose to do this in small groups or with the whole class</li> <li>3. The teacher explains what fallas is about using provided background information – “As you may know (or not) the main celebration of the city of Valencis in Spain is centred around these monuments called Fallas. This tradition has been going on since the mid 18th century, it takes place on the eve of St. Joseph’s day. As St. Joseph is the patron saint of carpenters, they lit small bonfires to celebrate this day. They burnt their unused or leftover wood from their workshops. As time went on, they started making small figures as a form of satire or social denounce about well-known members of society.”</li> </ol> <div data-bbox="641 1640 1395 1864" data-label="Image"> </div>
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	<p>4. Elements of the Festivity. In order to present the different elements of this festivity, in pairs, students guess the definitions that match the different elements and associate them to the right image:</p> <table border="1" data-bbox="431 606 1466 1514"> <thead> <tr> <th data-bbox="431 606 589 680">Element</th> <th data-bbox="589 606 1122 680">Definition</th> <th data-bbox="1122 606 1466 680">Image</th> </tr> </thead> <tbody> <tr> <td data-bbox="431 680 589 869">Fallera</td> <td data-bbox="589 680 1122 869">woman who is dressed in the traditional costume and takes part in the celebration</td> <td data-bbox="1122 680 1466 869"></td> </tr> <tr> <td data-bbox="431 869 589 1058">Mascletà</td> <td data-bbox="589 869 1122 1058">“concert” in which the music is substituted by the noise and explosions of the bangers</td> <td data-bbox="1122 869 1466 1058"></td> </tr> <tr> <td data-bbox="431 1058 589 1131">Ninot</td> <td data-bbox="589 1058 1122 1131">figure in a falla</td> <td data-bbox="1122 1058 1466 1131"></td> </tr> <tr> <td data-bbox="431 1131 589 1320">“Castillo” of fireworks</td> <td data-bbox="589 1131 1122 1320">fireworks composition of light and sound. It always takes place at night</td> <td data-bbox="1122 1131 1466 1320"></td> </tr> <tr> <td data-bbox="431 1320 589 1514">Cremà</td> <td data-bbox="589 1320 1122 1514">event in which the “falla” is burnt. It happens on the last night of the celebration</td> <td data-bbox="1122 1320 1466 1514"></td> </tr> </tbody> </table>	Element	Definition	Image	Fallera	woman who is dressed in the traditional costume and takes part in the celebration		Mascletà	“concert” in which the music is substituted by the noise and explosions of the bangers		Ninot	figure in a falla		“Castillo” of fireworks	fireworks composition of light and sound. It always takes place at night		Cremà	event in which the “falla” is burnt. It happens on the last night of the celebration	
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<p>2. <b>Brainstorming: opening out the issue to the students’ context</b></p>	<p>1. The teacher checks the previous task and asks which elements are related to “fire”. Then, students brainstorm if there is any celebration in their own country related to “fire”.</p> <p>2. Students read this text from an Australian student who experiences the Fallas in Valencia with a group of friends. They should pay attention to what</p>																		

	<p>shocks John the most from this celebration and talk about it in small groups. Do they agree with John?</p> <p><i>“This is a very interesting festivity. It happens at the beginning of spring. There is a big crowd of people walking the streets all around the city to see the Fallas, both night and day. Nearly all the streets in the city have their own Falla, well, two Fallas since there is one for adults and another for infants. You can hear bangers exploding too. At first I was scared by the noise but now I’m getting used to it. Sometimes naughty children throw bangers near your feet and laugh. My friend is really annoyed at that but I don’t mind since they only do it for fun, without any bad intention since nobody here seems to be bothered. The Fallas are astonishing, huge and colourful and they are funny too!</i></p> <p><i>They have comic figures that represent criticisms to society, celebrities, current affairs...they are denouncing problems but they deal with them with lots of humour. The bad thing is that they burn the Fallas at the end of the week. I can’t understand it, why would they want to burn those works of art year after year?”</i></p> <p>3. In the same groups, students try to come up with an answer to John's final question:</p> <p><i>“why would they want to burn those works of art year after year?”</i></p> <p>4. The different groups express their opinions. If no group finds the right answer, the teacher will provide it:</p> <p><i>“Burning the “fallas” is a symbol of the destruction all the bad things of the previous year to start the spring in a renewed way”</i></p>
<p><b>Introducing the aim of the project</b></p>	<p>1. The teacher shows an infants' falla from <a href="http://www.fallas.com">www.fallas.com</a> and reads the following text:</p> <p><i>“ In the 50s the children built their own falla, however, with the time Fallas became something more elaborated and this changed. Nowadays it is common</i></p>

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	<p><i>that many schools build their own falla to be burnt on the last day of class before the holidays. To do so, the students contribute creating their own handcrafted “ninots”. All the ninots or figures are put together and would conform the school “ Falla”.</i></p> <p>2. Show photo of the falla of our school IES CID</p>
<b>Instructions to contextualise the project</b>	<p>The teacher sets the task:</p> <p><i>“Imagine you have been hired to design and build a FALLA in your country. This is going to be the final task of this project. The topic will be THE PROBLEM OF PLASTICS OVERUSE! Recycled materials should be used in its construction.”</i></p>
<b>Step 1: Research</b>	<ul style="list-style-type: none"> <li>• Since building the falla aims to be a tool to reflect from different areas about one of the biggest challenges of our society, before and also during the construction of the monument , research on the “Problem of Plastics in our society”, has to be developed in the different subjects. It is necessary to reflect, try to understand the problem and its implications. For this would be extremely enriching if different subjects coordinate activities on the topic.</li> </ul>
<b>Step 2: Designing a previous sketch</b>	<ul style="list-style-type: none"> <li>• The students design a sketch that contains as much detail as possible. Preferably final colours should also be included.</li> </ul>
<b>Step 3: Designing the structure</b>	<ul style="list-style-type: none"> <li>• The students with the help of the teacher elaborate a drawing of the structure which includes all details such as measurements, materials, etc</li> </ul>
<b>Step 4: Building the structure</b>	<ul style="list-style-type: none"> <li>• In this step of the project materials should be ready.</li> <li>• After distributing the construction tasks among the students , the structure of the “Falla" is built.</li> </ul>



<p><b>Step 5: Finishes of the structure</b></p>	<ul style="list-style-type: none"> <li>The finishes of the falla include mounting and painting the structure</li> </ul>
<p><b>Step 6 Making the figures</b></p>	<ul style="list-style-type: none"> <li>Creating the all the elements and figures</li> </ul>
<p><b>Step 7 Adding the written texts</b></p>	<ul style="list-style-type: none"> <li>Writing slogans that can be added to the images and provide meaning to the whole project</li> </ul>
<p><b>Step 8 Plantà (mounting the falla)</b></p>	<ul style="list-style-type: none"> <li>On the day and place arranged for this school event, the whole “Falla” is put together by the students following the directions of the teachers</li> <li>The written texts with slogans are also added</li> </ul>
<p><b>Step 9 Cremà (burning the falla)</b></p>	<ul style="list-style-type: none"> <li>To complete the final project, after asking for the necessary permissions and under the surveillance of the fire brigade, the school gathers around the “Falla” and this one is set on fire.</li> </ul>

## TOOL 2 STORYTELLING

### LESSON PLAN:

#### ***A PUPPET STORY ABOUT THE PLASTIC IN THE OCEAN***

### PROJECT

- TO DESIGN AND MAKE PUPPETS OUT OF RECYCLED PLASTIC BOTTLES IN ORDER TO TELL A STORY ABOUT PLASTIC POLLUTION IN THE SEA

### AIMS

# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

- To undertake a project involving the use of ART as well as STORYTELLING to reflect on the amount of plastic that ends up in the ocean
- To promote creativity and imagination
- To bring awareness about the environment to young students so that they understand the importance of working for a sustainable planet
- To become aware of a different way to tell, represent and visualize stories
- To apply sight and manual coordination to manage and explore objects
- To improve the relationship and cooperation among peers
- To plan a project understanding the different steps and procedures

## LEVEL

- Secondary (lower years)
- The students of the 2<sup>nd</sup> and 3<sup>rd</sup> year of Secondary Education will prepare and perform this project for the 1<sup>st</sup> year students who are working on the subject of taking care of the environment in the subject Interdisciplinary Project.

## TIME

- 8 sessions altogether:
  - For the three first sessions the students read the story and design and choose the materials for making the puppets
  - In the 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> session they make and decorate the puppets and decorate the stage background and attrezzo
  - In the 7<sup>th</sup> and 8<sup>th</sup> session the students distribute the roles, rehearse and perform in front of the audience.

## MATERIALS

- Worksheets with the story “ The Lump”
- Recycled bottles and other recycled plastic

- Paint, paper, cardboard, cellotape, glue, wooden sticks (barbacue / choc-ices), paintbrushes, stickers, glitter...
- Blue cloth to cover the puppetiers

## INTRODUCTION

Storytelling with puppets is a fascinating idea for adults and children. When a child is in front of a puppet, he/ she talks with it, laughs, moves and activates his / her imagination and fantasy. It is impossible to stand still in front of a character who can open the door to a dream world where everything is possible. Meanwhile, environmental education is really important since when we educate children, we are bringing up citizens that will be responsible, civic, conscious and caring. Putting it altogether, storytelling with puppets and environmental education, we will achieve several goals such as teaching the value of responsibility or making them aware of each individual's power to create a better world.

## PROCEDURE

<p><b>Lead-in</b></p>	<p>1. Reading the story “ <i>The Lump</i>”</p> <p>The English teacher provides copies of the story. The story is read at home individually as homework.</p>
<p><b>Introducing the aim of the project</b></p>	<p>1. The students are told that they are going to represent this story with puppets that they will design and elaborate. They will have to design the scenery or background for the play and rehearse and perform for the 1<sup>st</sup> year class.</p> <p>2. They will have to bear in mind that the objective of the project is to reflect on the amount of plastic we throw in the ocean and its consequences.</p>
<p><b>Designing puppets and</b></p>	<p>1. The different roles are assigned among the students. There are 7</p>

# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

<p><b>assigning the different roles</b></p>	<p>characters.</p> <ul style="list-style-type: none"> <li>• Angelfish</li> <li>• Her mum</li> <li>• Her grandpa</li> <li>• Mrs Whale</li> <li>• A turtle with some plastic stuck around its shell</li> <li>• A seagull</li> <li>• A shark</li> <li>• The mystery Lump ( plastic waste)</li> </ul> <p>1. The story is role-played in class. Then, students are divided into small groups. Each group will design a character (puppet) and decide which recycled plastic materials are going to be used and how they are going to elaborate them. The teacher provides some photos to help with ideas</p>
<p><b>Making and decorating the puppets</b></p>	<p>1. Each group makes the puppet or character and decorates it according to plan</p>
<p><b>Designing and decorating the stage background and attrezzo</b></p>	<p>1. Students design and decorate the scenery for the stage background</p> <p>2. For the story plot several plastic objects will appear from time to time: plastic bags, cups, straws, toys and the plastic packaging, to help telling the story</p>
<p><b>Role distribution and rehearsal</b></p>	<p>1. At this stage students are assigned roles. They will be classified into puppetiers, voice over and attrezzo.</p> <p>2. The collaboration of English and Drama teachers will be necessary to help prepare the performance</p>



	<p>3. A rehearsal of how to manipulate the puppets at the same time that the voice over actors and actresses are telling the story and the coordination of all of them will take some effort</p>
<p><b>Performance</b></p>	<p>1. The students perform the story in front of the 1<sup>st</sup> year class.</p> <p>2. A suitable space should have been booked or prepared in the school or if it is going to be performed in the playground, chairs and stage should be organised.</p>

### TRANSCRIPT OF THE STORY “ The Lump”

Grandpa:

‘Anglefish, you must be wary of something in our sea that’s big and scary. It’s huge and has lumps of all shapes and sizes, they say it can change into different disguises. An eel told me once that he saw it and fled, this mystery lump was grey, white, blue and red. It sneaks up on creatures just swimming along, snagging them, tagging them it’s really strong. There’s no sign of eyes, or a mouth, or a nose, but i’ve heard that it grows and grows and grows.’

Narrator:

Angel was wary. A mystery creature so vast and vicious?

Anglefish:

"Grandpa, I'm gonna see if it's true.  
I'll be a detective, looking for clues."

Narrator:

So off she set with a plan not to fail.  
First puzzle to solve was whose was that tail?





## RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

Angelfish:

"Something so huge must be queen of the sea.  
Mrs Whale, Mrs Whale, can you help me?  
You know a lot, you're a very good teacher.  
Do you know about this mystery creature?"

Mrs. Whale:

"I've seen it! So big your eyes can't take it in.  
It grows all the time, hard to imagine.  
I searched for a face but it could not be found.  
No singing or speaking, this thing makes no sound!"

Angelfish

"Nothing to talk to, no face you knew,  
bigger and bigger it grew and grew.  
Yes, yes, what you're saying must be true,  
Grandpa told me the same thing as you."

Narrator:

Just as Angel thought, "This thing does some weird,"  
out of the shadows a turtle appeared.

Angelfish

"Turtle, oh, Turtle, can you help me out?  
Have you heard of a lump that's floating about?"

Turtle:

"That brute is the worst, you see what it did?  
I swam up to what I thought was a squid,



when suddenly this thing wrapped around my shell.  
It squeezes, I'm stuck with it as you can tell."

Angelfish;

"This thing latches on to have a chew?

You've helped me out with another clue.

Yes, yes, what you're saying must be true,

Grandpa told me the same thing as you."

Narrator:

And then, because the sea is never dull,  
right past Angel went a swimming...seagull?!

Angelfish:

"Seagull! Seagull! Would you care to assist?

Are you aware this strange creature exists?

Seagull:

Something that's bumpy and very vast...

"I've seen it from the air as I've flown past.

A huge sprawling stew, it looks pretty strange.

It's red, green, blue, yellow, white, black, orange.

Colours sound nice but it's not at all charming.

New bits appear at a rate that's alarming!"

Angelfish:

"So much of it that it looks like stew,

you say it's red, white, orange and blue.

Yes, yes, what you're saying must be true.

Grandpa told me the same thing as you!"

# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

Seagull:

"It's just over there, you're not far away.  
It looks like it's floating towards the bay."

Narrator:

Off Angel shot, time to find out the truth.  
BOOMF! She whacked into a gigantic tooth!

Shark:

"Hello," "and how do you do?"

Angelfish:

Which one scares me more?  
"Shark, I need help from you!  
There's an odd ocean creature, some sort of a beast,  
it's over there hunting for its lunchtime feast."

Shark:

"Something has plans to take over from me?  
I won't let that happen, this is my sea!"

Narrator:

Together they travelled towards the huge lump.  
Its presence had put Mr Shark in a grump.  
As Seagull predicted, soon all of this 'stuff'  
was strewn through the water and made swimming tough.  
Shark put on a brave face, his tail gave a flick,  
he nibbled a lump and then promptly got sick!



Shark:

"I don't like this place, I'm not sticking around.

Goodbye, Angelfish."

Narrator:

He fled, homeward bound.

Angel thought,

Angelfish:

"Well, I followed each clue. Shark took a bite which made him spew.

Whale said no face, so no one she knew, t

hat it was big and grew, grew and grew.

Turtle said it would take hold and chew,

Seagull said that the mess looked like stew.

Grandpa said it was white, grey and blue.

I wish it weren't but this lump is true.

Now that I'm here, what am I to do?

How can I escape?"

Narrator:

Just then she got snagged,

unable to swim she was being dragged.

Poor Angelfish, this is not what she planned,

when into the water appeared a big hand.

It grabbed her,

plucking her out of the water.

Angelfish's Mum:

"Let's get this off",

Narrator:

## RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

said the mum to her daughter.

With eyes squeezed shut she was too scared to see,  
but in a few seconds she was set free.

The mum said,

Angelfish's Mum:

"The problem with all this plastic  
is animals eat it, then they get sick.  
Or it traps and hurts them, they can't escape.  
Sometimes we find them, they're not in great shape."

Angelfish:

"But we must help!"

Angelfish:

"Recycling is a good way to begin.  
So many things we have we can reuse.  
Plastic bags, cups and straws we can refuse."  
"I know that I can get just as much joy  
when I'm playing with a secondhand toy."  
"We can reduce the plastic used and bought  
and all of these things will help out a lot.  
Let's grab some of this and take it away,  
we're helping clean up the ocean today."

Narrator:

Angel sped home, gathered everyone round.

Angelfish:



"I have to tell you about what I found!  
Grandpa, I followed each single clue,  
everything that you told me was true,  
but that lump won't eat us, not is it food,  
yet it's a big problem, this I understood.  
We must keep away, it is so dangerous,  
they call it plastic and it's caused a fuss.  
Land creatures say they will take it away,  
but let's warn our friends from deep sea to bay.  
I hope those land creatures will be fantastic  
by making sure they clean up their plastic!"


<https://www.youtube.com/c/RubbishReads>

***An original story for young children about sea pollution and what can be done to help by Rubbish Reads who make accessible and fun original-content videos for children, teaching them about the environment and the simple changes they can make from home to help our planet.***



# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

- **BC NAKLO Slovenia**

-  **TOOL 1: Exhibition**

- **STEP 1: PLANNING**

Discuss the problem of plastic pollution with students in class.

Suggest making an exhibition on the topic (for example: PLASTIC POLLUTION: CAUSES, CONSEQUENCES & SOLUTIONS).

Brainstorm activities and final outlook of the exhibition (posters, videos, items, place, time ... )

Write down the agreed aspects of the topic and groups (students) who will be working on them.

- **STEP 2: CONDUCTING ACTIVITIES**

Monitor and support students working in groups, provide materials, resources and contacts if necessary, encourage independent work.

- **STEP 3: OUTCOME – PUTTING UP AN EXHIBITION**

Involve students, colleagues and staff to put up an exhibition.

- **STEP 4: DISSEMINATION**

Make sure the exhibition reaches the widest possible audience: organise an opening, viewing by various groups etc. Ask colleagues to involve the exhibition in their teaching: their students can have a task to see the exhibition and do a worksheet based on it. Include the exhibition in any events going on at the school/institution (mobilities, guests, open door days for potential students, teacher-parent conferences etc.).

- **REFLECTION ON WORKING WITH TOOL IN THE CLASSROOM:**

The students were actively involved and motivated to work on the topic. The activities covered a wide range of learning styles and resulted in a colourful and well-accepted exhibition on the school premises. The exhibition has been used as a tool for other classes (to find information, do tasks, worksheets etc.). At the opening, the students gave presentations.

-  **TOOL 2: Magazine**

- **STEP 1: ACTIVATE STUDENTS AND STAFF**

Find several willing colleagues to conduct at least one plastics-related activity in at least one of their classes. Use any school events or activities that could focus on plastics (project days/week(s), fieldwork, trips etc.) Plan and give instructions for students to make outcomes on these activities (reports, articles, interviews, word games, puzzles, photos, illustrations ... ).



- **STEP 2: CREATE THE MAGAZINE**

Collect contributions, edit, proofread, organise in sections etc. Involve a few students and/or colleagues. If possible, have it laid out and printed professionally. Make a Pdf and post it on the school's website.

- **STEP 3: DISSEMINATION**

Encourage classroom use: have students read contributions and write reflections and/or experience, do wordgames and puzzles etc.

- **REFLECTION ON WORKING WITH TOOL IN THE CLASSROOM:**

Numerous students and staff were involved in various activities (project week, art lessons etc.). A wide range of learning styles was addressed so the students were actively involved and motivated to work on the topic. The magazine is available in both electronic and printed version and can be used to present the institutions to our partners, clients, guests in mobilities and more. Despite the increasing tendency to use electronic tools and outcomes, the printed version is still extremely useful in directly reaching out to partners clients and guests in live meetings. Also, through the magazine, awareness was further raised among audiences who did not directly take part in the project.





# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

*“The most environmentally friendly product is the one you didn’t buy.”*

*Joshua Becker*

## IV EXAMPLES OF IMPLEMENTATION AND ASSESSMENT

- **E-GIMNAZIJA SERBIA**

Soon, we should visit the partner faculty (FTN Faculty of Technical Sciences/Department of Production Mechanical Engineering) where pupils will get to know more advanced activities in the technique and technology of 3D modelling and printing.



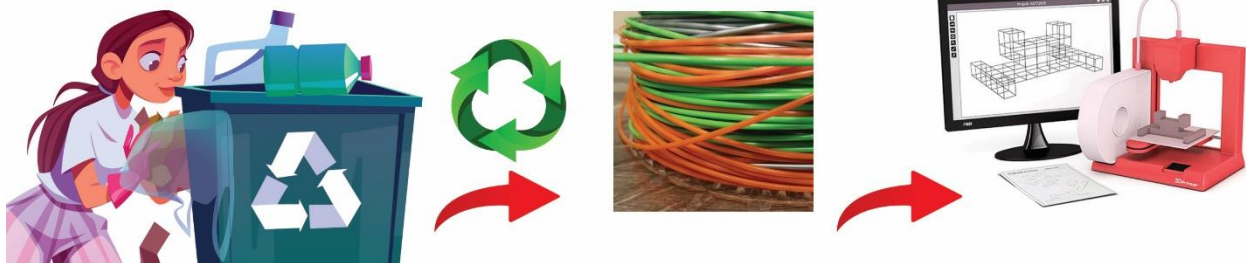
We will choose a work of art from the history of art that the pupils will model in 3D in a computer program designed for 3D modelling. Pupils get to know the new program and learn it. They directly participate in the work on the creation of a replica of the work of art and the realization of the project in which they are involved. The 3D printer will print a replica of the selected artwork using the filling we got from collecting PET packaging. We get a work of art from the waste.

Filament is actually a wire made of plastic or some other material that the 3D printer melts and pours or 'prints' three-dimensional objects from the melted material. Depending on what we print, we will use the appropriate type of filament so that the object we make has the appropriate, desired characteristics and features. PET is a good material for 3D printing. Materials from which filament for 3D printers are produced are PLA, ABS, PVA, PET, PETT, HIPS, Nylon, Wood, Sandstone, Metal, Magnetic Iron PLA (PLA with magnetic properties), Conductive PLA (PLA that can conduct electricity), Carbon Fiber, Flexible/TPE (flexible filament), Glow in the dark (Filament that glows in the dark), etc.

# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION



Acquainting pupils with the technology of polymer processing from collected waste (partner faculty FTN), visit to the faculty and visiting lecturers at the school. Designer of 3D modelling that means a lecturer who will train pupils to work on a new non-teaching (not taught through the curriculum in secondary schools) program.



## Assessment

Once the activities were completed both pupils and teachers were asked for their feedback on the activities performed as part of raising awareness on plastic pollution.

Students found the creation and design of boxes very interesting, applicable, and useful. Also, they enjoyed in making PP presentations, doing research, trying to decrease the usage of plastic.

Moreover, they are looking forward to the final part, where they will go to the Partner Faculty (FTN) and do the final step of creating 3D models, as well as modelling and printing.

- PGMS Cyprus
- Implementation

### Posters & Comic Strip / Digital Art

Below you can see samples of the digital art (posters & comic strips) that were created by the students as well as pictures taken during one of the classes. Both posters and comic strips will be exhibited on the Science Fair.



# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

Posters

**Do's**      **Dont's**

**bring your own water bottle**

**bring your own bag**

**recycle your waste**

**ECO-BRICKS**

How much plastic can fit into an eco-brick?

A 500ml bottle can fit up to 300 grams of plastic

Plastic bottles  
 Plastic packaging  
 Hygiene  
 Laundry  
 Shaving

Glass  
 Paper  
 Food  
 Biodegradable

**how to make an ECOBRICK**

**ALL PLASTIC EVER CREATED STILL EXISTS**

**Microplastics pollution**

**SMALL BUT HARMFUL**

Each year, 8 million metric tons of plastic litter end up in our oceans every day.

8 million metric tons of plastic litter end up in our oceans every day.

Microplastics always come back to you, because they accumulate in the food chain.

5.25 million metric tons of plastic are produced every year.

**Microplastics and their effects**

**Health concerns:** Microplastics can be found in the environment and in our food. They can be ingested, inhaled, or absorbed through the skin. They can also cause physical irritation and inflammation.

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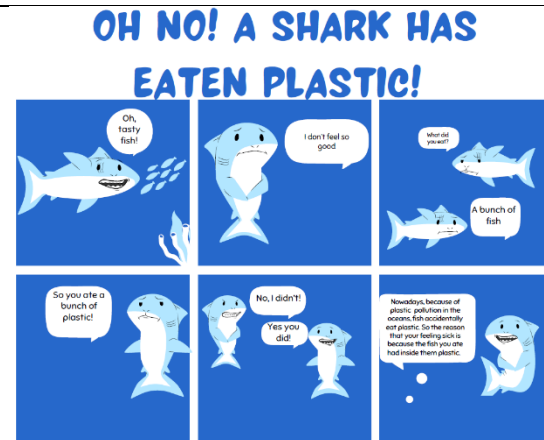
**Solutions:** Avoid purchasing products that contain plastic or other synthetic materials. Use reusable water bottles, plastic dishes, and bags. Be wary of any brands or products that contain the word "microplastic" in their name.

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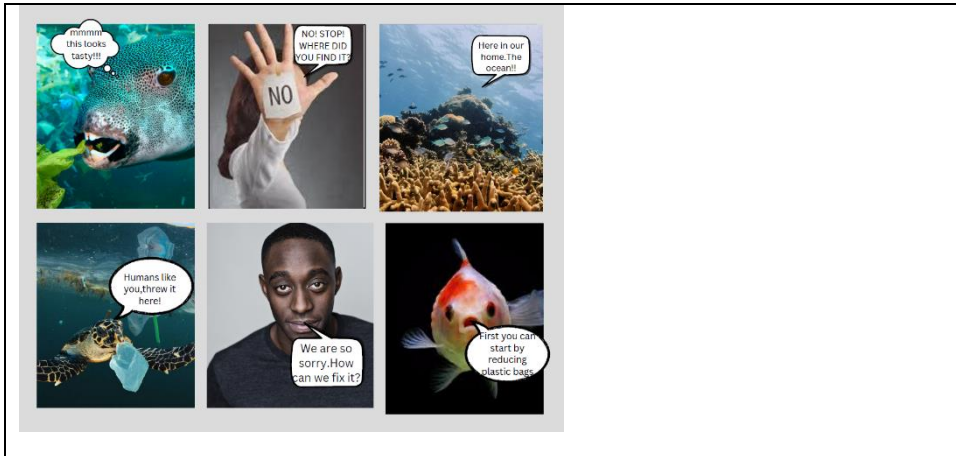
**OUR PLANET IS CHOKING ON PLASTIC**

Toxic additives can be absorbed by the skin, evaporate into the air or absorbed via the food or drinks we consume

### Comic Strip



# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION



- **Musical Instruments**

Below you can see pictures during the creation of the musical instruments as well as the finalised musical instruments.

The musical instruments are to be presented during the Science Fair and used on the dance performance to be presented on our Talent Show.

*Creation of the musical instruments using plastic containers dry food and beads*





*Painting of the musical Instruments*



**Assessment**

Once the activities were completed both students and teachers were asked for their feedback on the activities performed as part of raising awareness of plastic pollution.

Students found the creation of the musical instrument’s activity, more fun than the poster activity. The fact that from materials that they would once throw away they created something useful and fun was very interesting to them.

Students creating musical instruments, found it as a better way of helping in the reduction of pollution and realising that the reuse and not just the recycling plays a big role in the reduction of plastic.

Students that worked on the posted and comic strip activity on the other hand, felt that their task helped more in raising awareness, rather than helping reduce plastic usage.

The actual creation of the musical instruments was done over 2 teaching periods and students some of the students found that the time was not enough, and they would like some extra time.



## RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

The time assigned for the creation of the posters and comic strips was also 2 teaching periods and students found that the time was adequate to complete the task.

- **Student additional comments for musical Instrument Activity**
- *“That people can create musical instruments to spend their time effectively with materials found in the environment around them and at the same time help to create a more sustainable earth.”*
- *“That we could help in some way the environment in a fun way”*
- *“That we got the chance to help in this project and also reused plastic materials through the use of art.”*
- *“It was very interesting how the different instruments sounded but we would like to see even more options of creating instruments from plastic materials.”*
  
- **Student additional comments for Poster and Comic Strip Activity**
- *“What I liked the most about this activity was the ways humans found in order to save plastic and make non recyclable plastic reusable through eco bricks and etc.”*
- *“Learning new things and how to create nice posters that catch the attention of other people”*
- *“I had to work with my friends to create a creative comic strip in order to educate other people about microplastics”*
- *“I feel like instead of making posters and spending time on that we should actually make something that will help the environment for example eco bricks!!”*

With regards to teacher feedback art and music teacher found the activity interesting and fun. When asked if they would use this activity in the future the answer was positive.

All teachers when asked what they would take from these activities was that there’s a lot that can be done both creatively and practically in both helping to raise awareness and reduce plastic pollution. Also, they replied positively to the questions of the activities giving them new ideas and a new approach to their area of practice.

- **IES CID Campeador Spain**



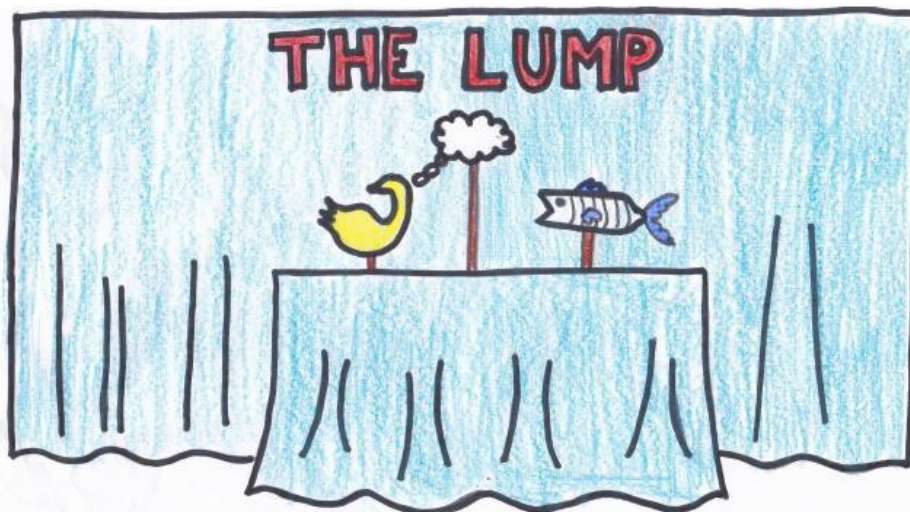
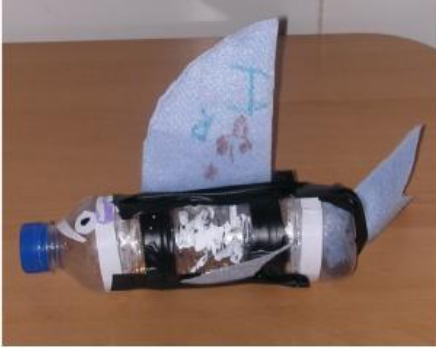
## EXAMPLES OF FUTURE IMPLEMENTATION OF TOOL 2 IN OUR SCHOOL

- Ideas for making and decorating the puppets



# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

- Ideas for designing stage background



## EXAMPLES OF IMPLEMENTATION IN OUR SCHOOL

- Step 1: Research

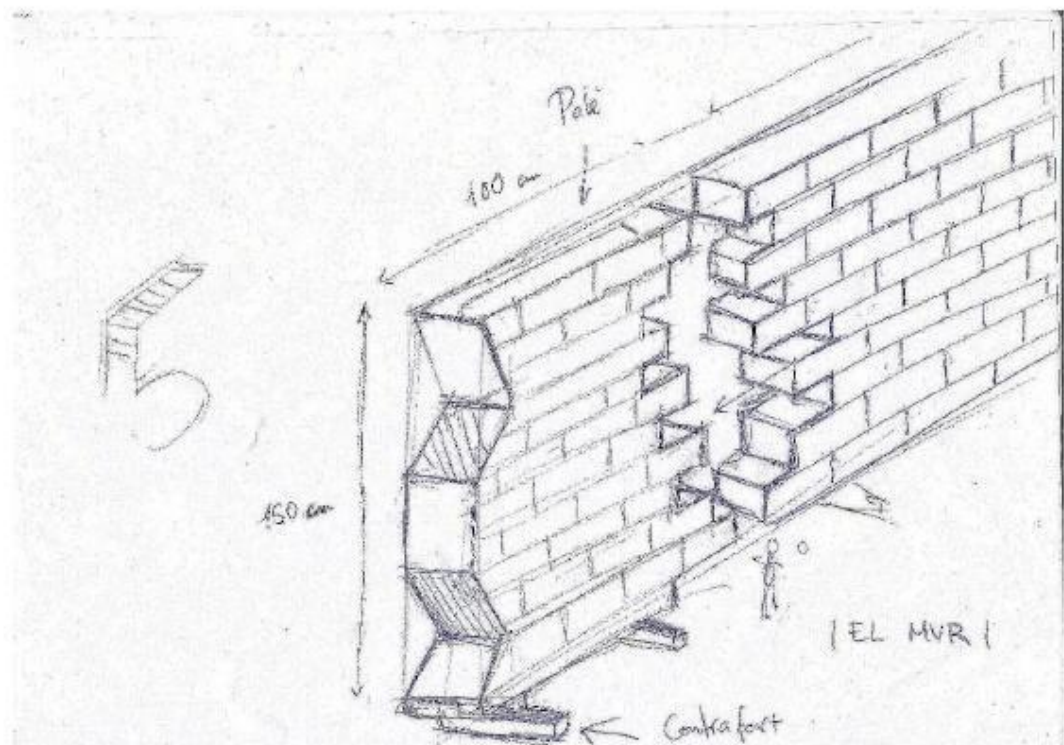
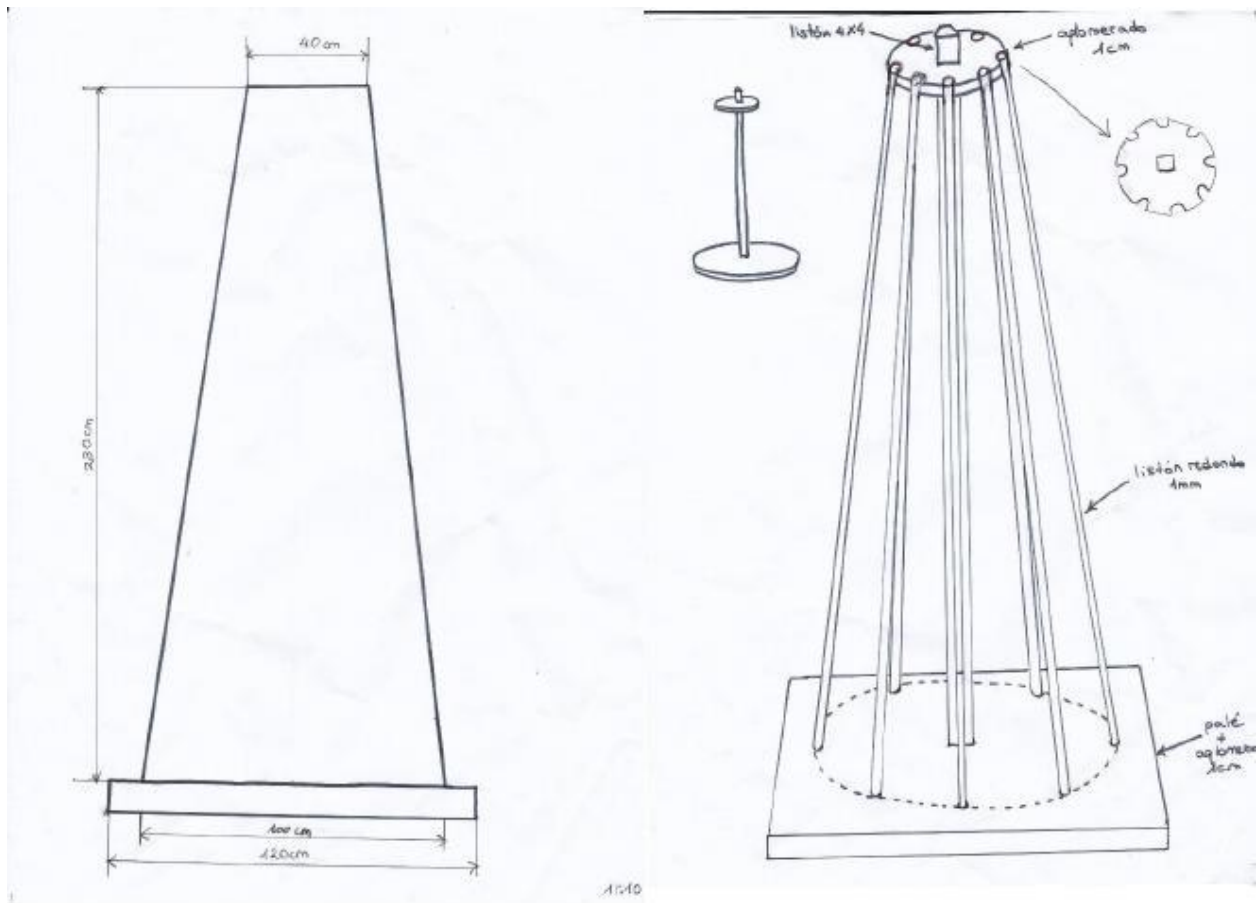
Since building the falla aims to be a tool to reflect from different areas about one of the biggest challenges of our society, before and also during the construction of the monument, research on the “Problem of Plastics in our society”, has to be developed in the different subjects. It is necessary to reflect, try to understand the problem and its implications. For this would be extremely enriching if different subjects coordinate activities on the topic.

- Step 2: Designing a previous sketch



- Step 3: Designing the structure

# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

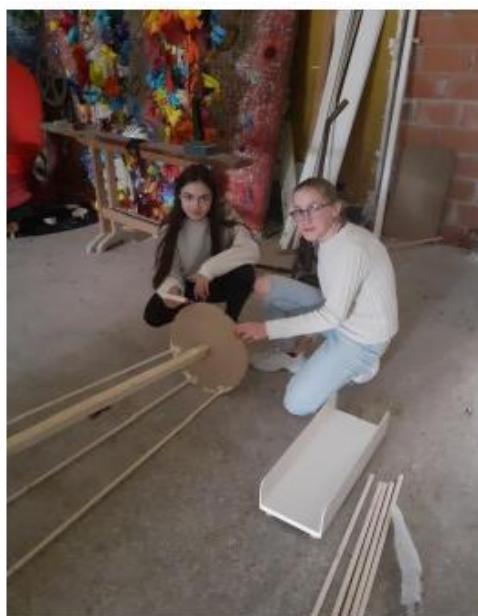


- Step 4: Building the structure



- Step 5: Finishes of the structure

# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION





- Step 6: Making the figures
- Step 7 Preparing the written texts





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- BC NAKLO Slovenia



The initial step to setting up activities with the ReLearn Plastics project was brainstorming. Within various contexts and opportunities brainstorming was conducted and the following ideas came up:

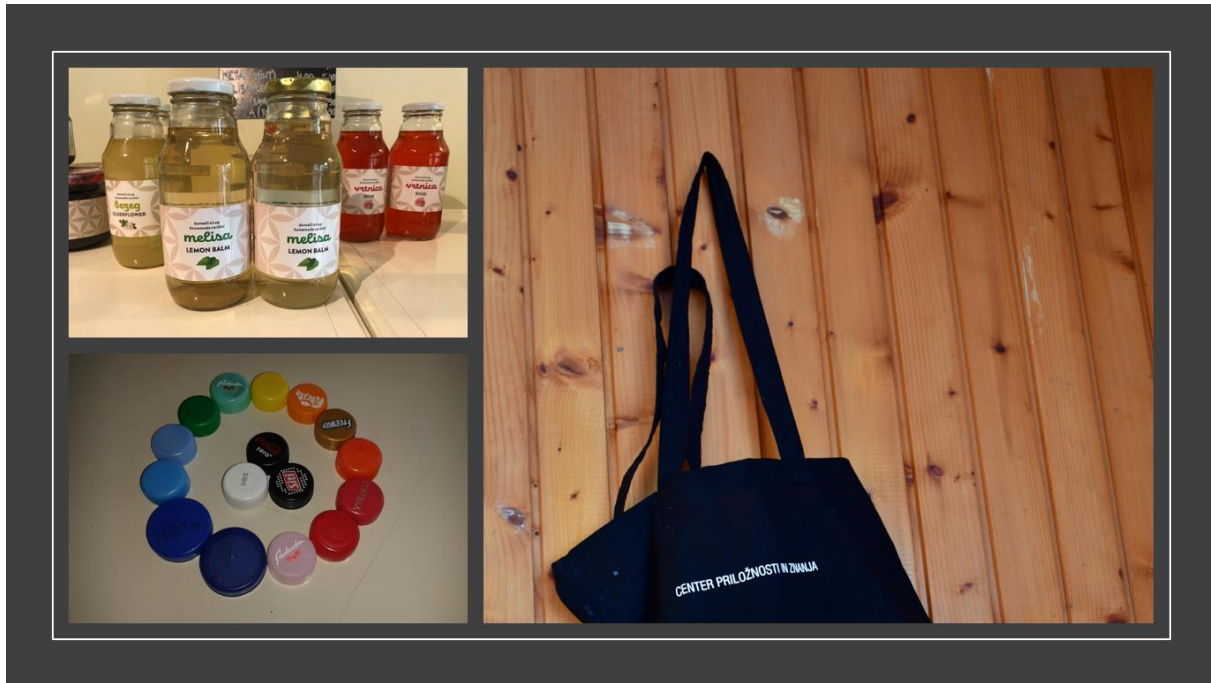
# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

## BRAINSTORMING, September 2021: Reducing use of plastics wherever possible ✓



The activities were then carried out with several colleagues and classes/groups of students. A substantial amount of text was produced (close to 7,000 words), along with dozens of photos and illustrations.

Among other successes we're proud to report that a huge step was made towards a 'plastic-free' school as we managed to remove plastic bottles from the school shop altogether. Both students and employees received glass bottles for personal use and are being encouraged to drink tap water. Some other measures were taken such as providing fruit and herb syrups to replace soft drinks from the vending machines.



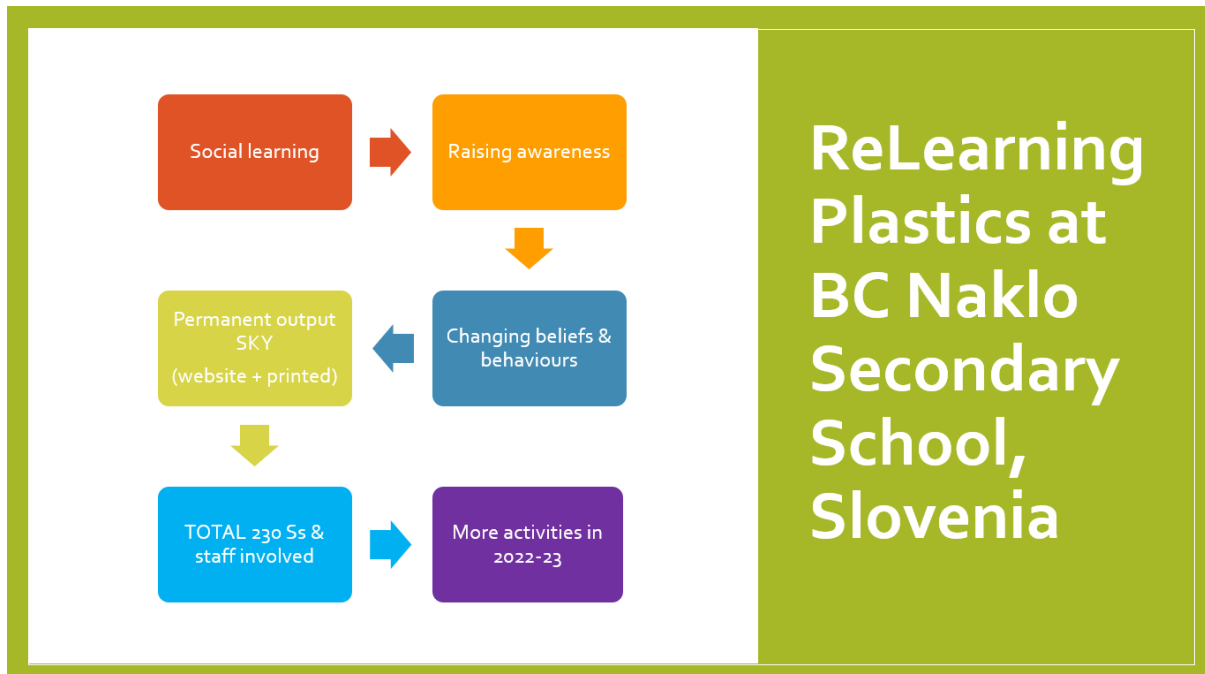
Extensive field-work was done in our project week and the findings and reports were published in the school magazine. So were some amazing artworks that both used waste materials and raised awareness about environmental issues, particularly plastics pollution, its causes, consequences and solutions.



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We believe significant social learning has been achieved through these activities. Awareness has been raised among both students and staff and also our partners in numerous projects and mobilities. Apart from changing beliefs and behaviours we produced some material output, a school magazine in English dedicated exclusively to plastic pollution, its causes, consequences and solutions. A total of around 230 students have been involved so far and more activities are being planned for 2022-23.



# ReLearning Plastics at BC Naklo Secondary School, Slovenia

- **TOOL 1: Exhibition**

- **STEP 1: PLANNING**

The students came up with the following aspects to research in the weeks to come:

- Plastic in the oceans & how to reduce it
- Things you didn't know about plastic bottles
- How to reduce the use of plastic in and around your home
- Things we could change at home (+ stories): NEW YEAR'S RESOLUTIONS
- How to reduce the amount of plastic waste at a picnic
- Questionnaires on the use of plastics (school shop, municipalities)

- Through internet research and addressing their family members the students compiled the following information and wrote the texts below.

- **Things you didn't know about plastic bottles**
- They can **leak** into water if exposed to heat or left to sit for long periods of time.
- The **chemicals** could mess with **hormone levels** in your body.
- They contain **microplastics**. Yes, those microplastics that are killing millions of animals!
- Bottled water is nothing more than **filtered tap water** packaged to sell for money.

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- *Harmful chemicals such as phthalates in plastic bottles **increase risk of cancer**.*
- **How to reduce the use of plastic in and around your home**
- 1 Use **reusable** or paper shopping bags instead of **disposable** plastic bags.
- 2 Use an **electric** toothbrush or a **biodegradable bamboo** toothbrush.
- 3 Say no to plastic products such as cutlery, straws, plates and cups. For picnics buy **wooden cutlery** and **paper plates** instead of plastic ones.
- 4 **Recycling** is very important! If you recycle a regular aluminium can, you could save up to 90% of the energy needed for its production.
- 5 Buy milk in **glass bottles** not in carton packaging dipped in plastic.
- 6 Join local **cleanups**.
- **Things we could change at home (+ stories): NEW YEAR'S RESOLUTIONS**
- \* I'll buy my family **bamboo toothbrushes**. I think it will be better for the environment and I also heard that they are better and healthier for our teeth. I hope this works out! (Tina)
- \* We have a family business and the New Year's gift for employees and family will be **glass water bottles**. I hope they all stop using plastic ones!
- \* Instead of buying more glasses and mugs I'll convince my family to use glass jars. This will reduce wasting money on things we do not need.
- \* Instead of using plastic plates, my family and I are going to use **plates made out of paper**. And instead of using plastic hair brushes we will use **wooden, bamboo hair brushes**.
- \* We decided that we want to buy more **food from local farmers** instead of buying it in the store. We also decided that we are going to plant and grow more food at home.
- \* I am going to use plastic bags less and use more **paper bags** or bags made out of **fabric** when shopping for greens and fruit. (Nika)
- \* I decided to use **fewer disposable plastic bottles** and try and use more **reusable stuff** like **thermal bottles** when going hiking and paper bags when going shopping. (NIK)
- \* Instead of buying new plastic bottles I save them. When I go to train I take a bottle from home and bring it back to us again next time. (SIMON)
- \* I will buy **less flavoured bottled water** and try to replace the water with tea or compote. (ANJA)
- \* In our shop at home we sell milk in plastic bottles. I will make sure that they are **replaced with glass bottles**. (JERNEJA)



- **How to reduce the amount of plastic waste at a picnic**
- \* A lot of plastic comes from plastic bottles so instead of plastic ones we can buy drinks in glass bottles. People can bring along their own reusable glass or aluminum bottles and fill them with tap water.
- \* A lot of meat, fruit, vegetables and soft drinks are packed in plastic – avoid them! Shop for meat, fruit, veggies and drinks with a reusable, washable textile bag or mesh.
- \* Instead of plastic plates we can buy paper plates and plastic cutlery can be replaced with wooden cutlery.
- \* Instead of fire, you can use solar cooker for cooking.
  
- **Questionnaire: School shop**
- Koliko plastenk prodaste na dan/teden/mesec/leto?
- Ali je mogoče plastenke izključiti iz prodaje? Če to ni mogoče, ali bi jih lahko nadomestili s steklenicami? Če da, v kolikšni meri? Koliko druge plastične embalaže prodaste na dan/teden/mesec/leto?
- Ali bi lahko plastično embalažo nadomestili z drugo (papirnate škatle za sladice ipd.)?
- Na koga se obrnemo, če želimo spremembe?
  
- **Questionnaire: Municipalities**
- \* Ste bili kot občina kdaj udeleženi v kakšni akciji za zmanjševanje uporabe plastike?
- DA (v kateri?) NE (zakaj?)
- \* Ali vaši zaposleni za hidracijo uporabljajo plastenke?
- DA, vendar plastenko uporabijo večkrat
- DA, vsakič vzamejo novo NE, uporabljamo drugo rešitev (kakšno?)
- \* Če imate kavomat, ali uporabljate plastične lončke za enkratno uporabo, papirnate lončke, svoje skodelice, drugo?
- \* Če uporabljate plastične lončke, ali bi bili pripravljeni kaj spremeniti?
- \* Ocenite, koliko lončkov, plastenk in druge plastične embalaže na občini porabite na dan/teden/mesec/leto.
- \* Kaj bi bili pripravljeni spremeniti za zmanjšanje uporabe plastike?
- \* Na kakšen način bi pri zaposlenih spodbujali uporabo lastnih steklenic, skodelic itd. ter zmanjševanje uporabe plastike?

- **STEP 2: CONDUCTING ACTIVITIES**

- Activities were conducted in groups both in class and outside of class. The students were relaxed and motivated. The weaker students benefited from constant support from the



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teacher in terms of pointing out the more relevant topics and goals, strategies and methods of achieving them.

- **STEP 3: OUTCOME – PUTTING UP AN EXHIBITION**

- Students and colleagues (art teacher, environment conservation teacher) were involved to offer consultations on the content as well as design, materials and place. The linguistically challenged students were engaged in designing and putting up the exhibition while still passively dealing with the linguistic material. The content was thus 'recycled' several times in both active and passive way.

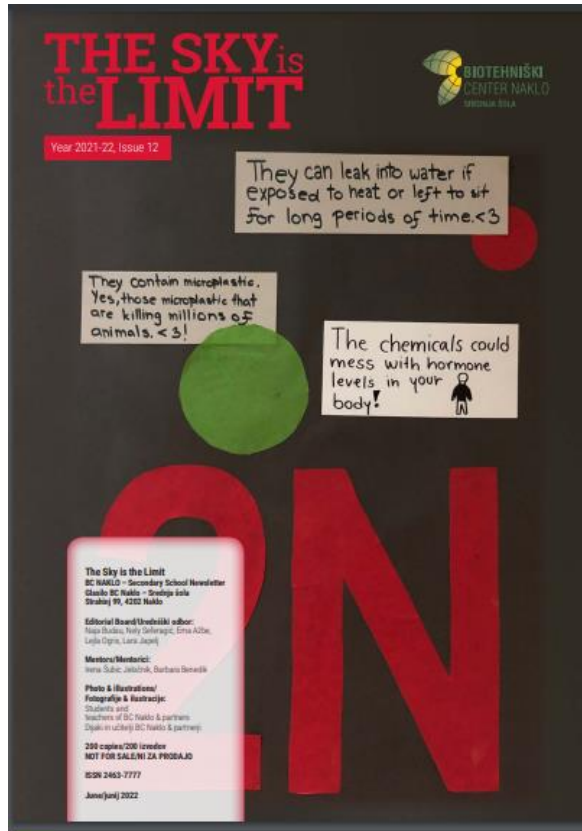
- **STEP 4: DISSEMINATION**

- We made sure the exhibition reached the widest possible audience: we organised an opening, and brought individual classes during English and environment conservation lessons to viewing the exhibition. Students from the class who prepared the material gave presentations. Worksheets were made for students of other classes to find information on our exhibition panels and report on it in class. The exhibition was presented in the English magazine. The exhibition was thus incorporated in various lessons by several teachers. Our guests in the mobility from Poland were taken to see the exhibition and discussed it in class with their peers here at our school.

- **REFLECTION ON WORKING WITH TOOL IN THE CLASSROOM**

- The students were actively involved and motivated to work on the topic. The activities covered a wide range of learning styles and resulted in a colourful and well-accepted exhibition on the school premises. The exhibition has been used as a tool for other classes (to find information, do tasks, worksheets etc.). At the opening, the students gave presentations. The materials were published in the school magazine which was dedicated exclusively to the topic of plastics:

- <http://www.bc-naklo.si/srednja-sola-in-gimnazija/gimnazija/dejavnosti/krozki/angleski-krozek/>
- [http://www.bc-naklo.si/fileadmin/srednja\\_sola/krozki/TSITL\\_12\\_20062022.pdf](http://www.bc-naklo.si/fileadmin/srednja_sola/krozki/TSITL_12_20062022.pdf)



# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

## Getting rid of plastic bottles is just a start

By Mija POGAČNIK

Ekolog brez meja (Ecologists without borders) is a Slovenian non-profit environmentalist organization. They have proposed that we take drastic measures in order to reduce the usage of plastic bottles in shops and other public places. They are going to issue certificates to businesses and organisations who would commit to getting rid of plastic bottles.

I undoubtedly support their proposal. Not just that, I also believe that it is necessary. Plastic is a huge environmental problem. In principle we could recycle it, but the reality is very different. Just under 10% of all plastic gets recycled. Another big problem is that it takes at least 80 years for plastic to decompose. That way, used plastic is piling up in nature and spoiling the lives of not just people but also other organisms.

On the one hand, I understand that it would be a big change for factories to switch from plastic bottles to other reusable or easily decomposable containers. It would also be a huge investment. Alternative materials are more expensive than plastic. Consequently, drinks would become more expensive for us to buy.

On the other hand, we have to understand that we need to invest in restoration of nature. Humans can't exist without nature. If we destroy it, we destroy ourselves.

On that note, I would like to add another suggestion. I would like to expand the Ecologists' proposal on to plastic bags. They present another big problem that we could easily fix. The change is necessary and I strongly believe that we still have time to save our planet.



## Lisjak olive mill and olive oil manufacturer, all-out zero-waste

By Kristijan URANKER, Andreja ZUPAN & Klara POVALEJ

Lisjak is the most well-known olive mill and olive oil manufacturer in Slovenia. The company is located by the sea, near the town of Koper. They have a lot of olive trees and, most

importantly, fresh air and land. They are proud to be a zero-waste company, reportedly the only zero-waste olive oil manufacturer in the world. This means they use all parts of the plant from

olives to wood, in different ways. For example, olives are ground into an olive paste from which oil is extracted. The paste is further used in production of cosmetics and animal food. The packaging is mostly made of glass and wood. Stones are used as heating in the mill and since there are so many, they can even be sold as heating fuel. Olive tree wood is made into lovely kitchens and home decor items such as cutting boards, bowls and souvenirs.

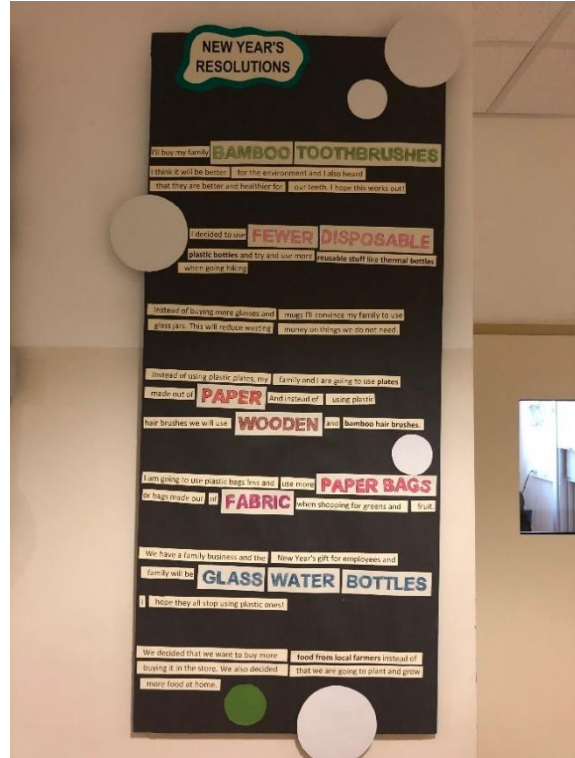
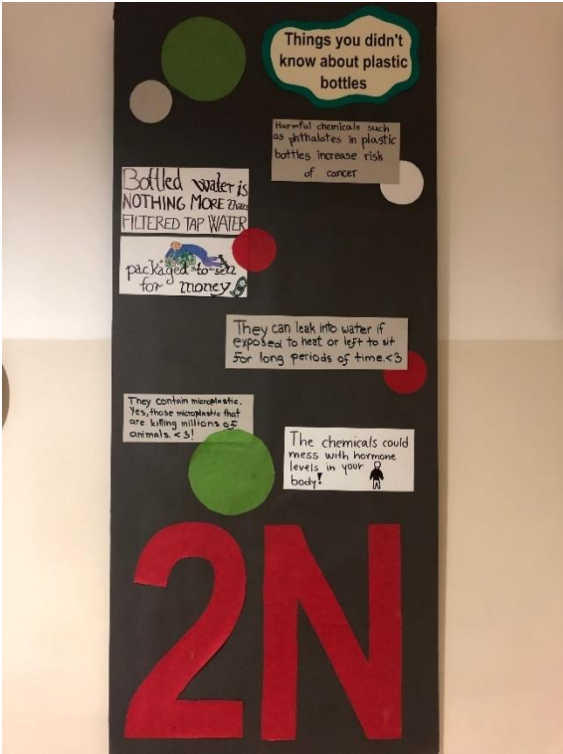
The company uses olives from local farmers and in return makes olive oil for them. They produce a variety of different oils (some with lemons, oranges, chilly peppers and truffles). Some of the company products are sold in chain stores like Hoster, and exported to Switzerland.



WE HAVE LEARNT ...

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# RELEARN PLASTIC: INNOVATIVE METHODOLOGIES IN SCHOOLS FOR STRENGTHENING THE AWARENESS AND ACTIVE CITIZENSHIP ABOUT PLASTIC CONSUMPTION

- **TOOL 2: Magazine**

- **STEP 1: ACTIVATE STUDENTS AND STAFF**

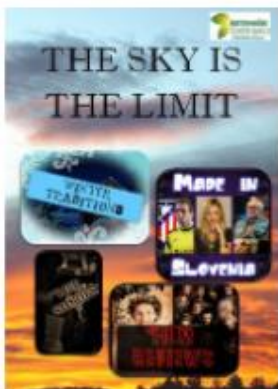
Students and staff were approached and encouraged to take part in one of the activities proposed in the brainstorming (see above) or suggest and conduct their own.

- **STEP 2: CREATE THE MAGAZINE**

We have been creating a school magazine in English for seven years and 12 issues have been published so far. A significant part of each issue focuses on environment conservation and sustainability. Green solutions are being developed and implemented – and presented in the magazine – in all our courses, including agriculture, horticulture and culinary studies on top of environment conservation. While raising awareness and empowering the students for agency, the magazine is a platform where students learn a range of life skills: teamwork, encouraging and soliciting action, initiating change, reporting on it, liaising with guests and partners, collecting contributions, editing, proofreading, organising in sections etc.

- **STEP 3: DISSEMINATION**

Once published, the magazine can be accessed at the school website. Links are shared with students, staff and partners. Alternatively, printed copies are given out per request, to the authors and editors, and are available in the school library. They are an essential element of the gift bags taken abroad and awarded to our guests onsite. Classroom use is actively encouraged: students read contributions and write reflections and/or experience, do wordgames and puzzles and create their own, they are encouraged to reflect on and evaluate the content, language and layout, then suggest changes and contribute.



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- **REFLECTION ON WORKING WITH TOOL IN THE CLASSROOM**

Numerous students and staff were involved in various activities (project week, art lessons etc.). A wide range of learning styles was addressed so the students were actively involved and motivated to work on the topic. The magazine is available in both electronic and printed version and can be used to present the institutions to our partners, clients, guests in mobilities and more. Despite the increasing tendency to use electronic tools and outcomes, the printed version is still extremely useful in directly reaching out to partners clients and guests in live meetings. Also, through the magazine, awareness was further raised among audiences who did not directly take part in the project.



## CONCLUSION

The output is innovative because it will provide teachers with resources about practical activities that can be used in the classroom and more options for using a project-based approach and art-based learning with the students, which will be more prepared for improving the key competences and being oriented to increase the awareness about environmental and social problems.

The IO is directly related with general objective and specific objective 1 and 2. Thanks to this guide with tools, there will be more practical resources for secondary school teachers and the active and participatory learning will be promoted in courses and classroom. Students will be more motivated to learn and work in the classroom and they will have new ways and options to strength key competences.

These materials are open and free, so there will also be an impact on other centers which are not included in the project. The resources will be available in the project website and specific dissemination will be done in order to increase its visibility. This will facilitate the access to other teachers for using the material, not only in secondary school studies but also in other subjects related to sustainable development and entrepreneurship.

