



## P.B.L Lesson Plan

<p><b>Title</b> The Way of Waste</p>					
<p><b>School</b> Name: A;exandru Stefulescu" School, Romania Web Site: <a href="https://alexandrustefulescu.ro/">https://alexandrustefulescu.ro/</a></p>					
<p><b>Subjects involved/potentially involved</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Subjects currently involved</th> <th style="padding: 5px;">Subjects potentially involved</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Biology, Social Sciences, History and English</td> <td style="padding: 5px;">Chemistry, Technology Education, Home Economics</td> </tr> </tbody> </table>		Subjects currently involved	Subjects potentially involved	Biology, Social Sciences, History and English	Chemistry, Technology Education, Home Economics
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<p><b>Description of how the lesson plan was designed and implemented</b></p> <p>The purpose of the activities included in the lesson plan is to develop students' attitudes and skills that will determine in the future a behavior necessary for waste management, but with minimal negative effects on the environment. The national waste management policy must subscribe to the European waste prevention policy and aim to reduce resource consumption and the practical application of the waste hierarchy. The provisions of national and European legislation aim to move Romania towards a recycling society and apply the waste hierarchy, for all types of waste.</p> <p>Energy, water, fuel and various additional substances are used to produce any product except the raw material. Obtaining each component, necessary for production, involves costs related to the use of natural resources, waste generation, water pollution with toxic substances and emissions of harmful gases into the atmosphere. It is important to be aware of the seriousness of the problem and to educate ourselves, to see the entire life cycle of a product and evaluate things according to the following criteria</p>					





- the amount of resources used;
- the type of material from which it is made (whether the resource is renewable or not);
- the distance between the place of production and the place of consumption;
- what impact on the environment does resource extraction and production entail;
- the possibility of recycling the material from which it is made, or the possibility of natural decomposition.

The issue of waste will be addressed in social education classes, geography, biology, study subjects aimed at the formation of skills such as: developing an investigative approach from the perspective of permanent education and for everyday life; cooperation for carrying out activities and for investigating specific problems of different groups and communities, by assuming social and civic values and norms; responsible participation in decision-making by exercising the spirit of initiative and entrepreneurship, respectively by demonstrating an active social, civic and economic behaviour

## Competencies and knowledge

### Development of prerequisite competencies and/or knowledge

A survey was applied to see how much the students know about this problem, waste issues so that teachers could design the lesson plan according to this knowledge.

Information about waste in Romania was collected and put together.

The number of lessons during which the lesson plan was to be implemented was set.

More competences and knowledge were developed :

Solution oriented and critical thinking.

Team work skills and cooperation strategies

Collect , synthesise and analyse important data

Integrate different subjects of study , such as: Science, Economics, Geography, Biology.

### Development of competencies and/or knowledge the experience aims to create

- be aware of the interdependence between the quality of the environment and the quality of life;

- acquire knowledge regarding the complexity of the relationship between the species of an ecosystem;





- take an attitude towards any activity that can destroy the balance in nature;
- have a positive conduct, to participate in environmental protection activities, a condition of a healthy life, in full harmony with nature.
- awareness of the causes, effects and countermeasures for climate change;
- adaptation to extreme weather phenomena and liability to potential natural disasters;
- understanding and using basic notions related to climate change;
- promoting ecology as a science of managing nature;
- identification of the main forms of pollution and its effects on the environment;
- training of household waste management and recycling capacities;
- developing creative abilities by reusing household waste as material for making toys;
- scientifically argue some phenomena in nature;
- present observations following the experiments carried out, drawing conclusions;
- identify key words related to the subject of the lesson, making connections between them;
- training of documentation and communication skills

### **Topics involved/potentially involved**

#### Topics actually involved

Circular Economy  
Waste Generation Trends  
Waste Prevention Strategies  
Waste Management Policies  
Resource Efficiency  
European Green Deal

#### Topics additionally involved





Waste Prevention and Management Strategies  
Waste Management Policies  
Circular Economy Advantages  
The 2030 Agenda for Sustainable Development  
Global Partnership Against Climate Change

### Authors

Teachers who worked on the design and implementation

Name	Class	Subject
Balotiu Sorin	7th A, B	Social Sciences
Troi Ileana	8th A, B	Home Economics
Malaescu Adela	7th C, E , F	History
Popescu Dacia	8th D, E	Biology

### PBL methodology: groupwork

The students were presented the PBL approach and the tasks.

The classes were split in groups of 4 and 5 students

The question “What can we do to minimize waste in our school, region and country?”

The students presented PPTs, videos and paper posters about the solutions they found.

### Tools and applications

- PPT
- WEB2.0 tools
- Tiktok
- Picsart
- Genially
- Film maker apps

### Pedagogical Impact – Feedback

The students participated actively in the lessons and developed the group work skills, they became more motivated.





They were able to analyse and make connections and find solutions to different problems.

### Student Involvement in Pathway Development

The students are now more aware about the waste problem in our country and they also found out more about this problem in the other countries partners in the project.

The students have broadened their horizons, became more careful about the environment they live and study in, developed solution-oriented thinking. They also gained ICT skills, they learned how to use different apps and web.2.0 tools.

They enjoyed working in groups and solving different tasks, find solutions and bring up ideas. They even initiated awareness campaigns in our school by delivering flyers about waste management.

The experience was a very good one

### Critical elements

At the beginning we were afraid that the age of the students might be a problem in developing such kind of subject using such a method with which they were not used to before. But they proved to be very actively involved and very curious since it was something new and attractive to them.

Of course, they didn't enjoy the idea of spending one more hour per week at school at first, but when they saw how the lessons developed, they liked it.

### Produced materials

Type of produced material			
x	<i>PPT presentations</i>	X	<i>campaigns</i>
X	<i>videos</i>	X	<i>flyers</i>
X	Posters		
X	exhibitions		
X	Paper cubes		

Other .....





Links to the resource(s)

<https://romaniasalbatica.ro/ro/filme/romania-salbatica>

<https://youtu.be/FN7vfYDM3ZY>

<https://youtu.be/Sp572udnPVg>

<https://youtu.be/RS7IzU2VJIQ>

**Evaluation method and tools ( grading rubrics etc)**

Post-tasks survey

