

*Creating an ECO online Natural Fit Virtual Programs to Prepare Students for  
boosting 21<sup>st</sup> century Skills 4 the Future (UNITY)*

*2021-1-SE01-KA220-SCH-000032448*

*STE(A)M-focused PBL for transferring 2021<sup>st</sup> skills for fighting against  
climate change*

**LESSON PLAN 7:**

**Building Recycling Bins at school**

*Presented by IC Toniolo, ITALY*

<b>Date:</b>	__/__/____
<b>Teaching staff:</b>	Mr/Mss/Ms
<b>Term:</b>	2022-2023
<b>Week:</b>	1
<b>Year Level:</b>	7-8 <sup>th</sup> grades
<b>Time/length</b>	7-8 hours
<b>Key Learning Area:</b>	Use of soft skills for climate change and blending interdisciplinary subjects, including science, math, art and social studies
<b>Topic/focus:</b>	Building Recycling Bins at school
<b>Lesson Name:</b> Building Recycling bins at school.	
<b>Foreseen Outcomes:</b>	
At the end of this lesson, students will be able to:	
<ul style="list-style-type: none"> <li>✓ understand the roles and importance of recycling for climate change;</li> <li>✓ design their recycling bins at schools;</li> <li>✓ improve their social skills, including group communication, interaction and discussion;</li> <li>✓ become more responsible citizens.</li> </ul>	
<b>Lesson Description:</b>	
This lesson focuses on how to recycle at school starting from a survey, direct observations of the real needs.	
Pre-requisites to this lesson plan: not applicable	
<b>Length (Lesson procedure):</b>	
This lesson will take about 7-8 hours.	
<b>Step 1. Lead in:</b>	
The teacher makes students aware of the importance of recycling as a way to fight the climate change showing them a video on “cutting down waste”. Ss will listen to some tips on how to recycle, then they will be grouped to tackle the “ <b>study case</b> ” in accordance with the students’ learning intelligence and or learning style. Here, teacher group students as:	
<ul style="list-style-type: none"> <li>✓ Group A: 2-3 students, having science learning interest/intelligence/capability/style</li> <li>✓ Group B: 2-3 students, having technology learning interest/intelligence/capability/style.</li> <li>✓ Group C: 2-3 students, having engineering (creativity) learning interest/intelligence/capability/style.</li> <li>✓ Group D: 2-3 students, having art learning interest/intelligence/capability/style.</li> <li>✓ Group E: 2-3 students, having math learning interest/intelligence/capability/style.</li> </ul>	
<b>Note:</b> As grouping the students, the number of students can change according to the class-size.	

### Lesson standard:

The lesson is standardized around STEAM-focused PBL for transferring 2021st skills for fighting against climate change. Here, we **focus on how to recycle at school**, making it a daily habit for everyone. The students' awareness about this topic will increase and they will be more responsible future citizens.

### Common Core State Standards:

In the Italian National Curriculum we have 33 hours allocated for "Citizenship", so this lesson can be easily integrated in the curriculum.

### Enduring Understandings:

The students will understand the core ideas and philosophy behind recycling. The learning outcomes of the lesson shall be used by the students in their future lives. Besides, the lesson is connected with following areas:

- ✓ soft skills development,
- ✓ interdisciplinary learning,
- ✓ blended/hybrid learning,

The lesson will also answer the following questions:

- ✓ Is the lesson transferable for skills development?
- ✓ Can it be teachable over and over again?
- ✓ Does it connect to real-life issues?

### Essential Questions:

- ✓ What are the connections of recycling with STEAM skills?
- ✓ What are the connections of recycling with PBL?
- ✓ How can recycling transfer soft skills?

Before the lesson implementation, the teaching staff shall brainstorm the above questions with the colloquies at the same school.

### Case section:

The teacher shall follow the following steps:

#### Step 1. Creation of the case:

Starting from the video shown about “cutting down the waste”, students are invited to think upon the importance of recycling. Then, the teacher will ask students these questions:

- ✓ Do we have enough recycling bins at school?
- ✓ How could they be like? (shapes/sizes/material)
- ✓ Where would you locate them in the school?
- ✓ What kind of signs/labels would you use to spot them better, easily and quickly in the school?
- ✓ How many should they be?

Students are grouped from A to E.

Questions for group A (Science-minded students):

- ✓ What can be recycled?
- ✓ What kind of bins would we need?

Questions for group B (Technology-minded students):

- ✓ How would you make/build the bins?
- ✓ What material would you use for the bins?
- ✓ How would you make the signs? What material would you use?

Questions for group C (Engineering-minded students):

- ✓ Where would you locate the bins in your school?
- ✓ How would you make the signs?
- ✓ What material would you use to make the signs and labels?

Questions for group D (Art-minded students):

- ✓ How would you decorate the bins?
- ✓ What colours would you use for the signs or labels?
- ✓ What would be the ideal shape/size of a bin for your school?

Questions for group E (Math-minded students):

- ✓ How many recycling bins would you need in your school?
- ✓ How many signs?
- ✓ How many labels?

The teacher elicits the answers, corrects them and finally leads to the students to take actions and coordinate the students' works to make the bins and the signs required according to what it has been agreed/studied.

**Skill focus:**

During the lesson, Cognitive Skills, such as decision making, problem solving, creative thinking and interpersonal skills will be the focus.

**Content:**

Building knowledge on recycling through STEAM-focused PBL approach.

**Assessments:**

The teacher will use summative assessments employed in this lesson to gauge students' learning.

**Evidence of Students' Learning:**

Students' learning evidence will be the graphics and the final products of the bins:

- building of the bins;
- the necessary signs to indicate where they are located in the school

**Texts/Resources:**

Video about "cutting down waste": <https://learnenglishteens.britishcouncil.org/study-break/youtubers/cutting-down-waste>

**Learning Activities:**

A series of tasks will engage students in the lesson. The activities are based on what students need to understand in order to perform what required to solve the problem "**Building recycling bins at school**" through replying to the essential questions defined under "**Case section**".

**Practice:**

Teacher will make students aware of the importance of recycling every day at school and at home pointing out that at our school there aren't enough recycling bins. That's the "**real study case**" presented to students and finds a solution.

Warm-up: show the video and make the students ready for learning for the topic-specific subject.

Practice: The teacher shows examples of bins (demonstration/modeling phase) (I do-we do-you do) Studio/Rehearsal/Workshop (students engage in creating/planning/making).

Learning Process: During the procedure, the teacher walks around the class, observes the students on what they need, controls, monitors and coordinates the groups if necessary.

**Suggested Extensions:**

- ✓ If in a school there are already recycling bins, another idea could be to build new ones of different shapes and colours.
- ✓ To extend the same activity to other schools or offices/premises belonging to the school.