

*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 1:**

**Recycling**

*Presented by Fthia in Action team*

### Lesson procedure:

<b>Date:</b>	__/__/__
<b>Teaching staff:</b>	Mr/Mss/Ms
<b>Term:</b>	2022-2023
<b>Week:</b>	1
<b>Year Level:</b>	Primary/low secondary (6-15 years old)
<b>Time/length</b>	1 hour.
<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>	Recycling practically and SMARTLY.
<b>Lesson Name:</b> Recycling: Active ways to contribute to climate change.	
<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 posters and brochures, relevant to environment issues,</li> <li>✓ improve their social skills, including group communication, interaction and discussion,</li> </ul>	
<b>Lesson Description:</b>	
This lesson shall demonstrate what recycling is, how it works, what we can do, which materials are recyclable, what to do to actively start recycling, where our trash ends up.	
Pre-requisites to this lesson plan (not applicable):	

### Length (Lesson procedure):

This lesson will take 1 hour, which also includes interdisciplinary learning.

Depending on how to implement the planned lesson, the teaching shall need some materials, including videos and papers. The teaching staff shall follow the following steps to implement the lesson successfully:

### Step 1. Lead in:

Teacher greets the students, and asks what they know about recycling, after collecting the feedback from the students, the teacher asks for grouping in accordance with the students learning intelligence and or learning style. Here, teacher group students as:

- ✓ Group A: 2-3 students, having science learning interest/intelligence/capability/style
- ✓ Group B: 2-3 students, having technology learning interest/intelligence/capability/style.
- ✓ Group C: 2-3 students, having engineering (creativity) learning interest/intelligence/capability/style.
- ✓ Group D: 2-3 students, having art learning interest/intelligence/capability/style.
- ✓ Group E: 2-3 students, having math learning interest/intelligence/capability/style.

**Note:** 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 the role of recycling. Through creating and learning, the students will understand how recycling works. Regarding this, it can be expected that understanding the role of recycling for climate change.

### Common Core State Standards:

The teacher shall connect and correlate the lesson with the national syllabus and or program, which shall incorporate the lesson with national program.

### 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:

Recycling is the process of reusing various materials or anything that is a quick result of human activity and which in its present form is no longer good for humans. As a demonstration lesson the teacher shall use visuals, posters, videos, etc. Then, the teacher asks the following questions to the students who are grouped in ‘**Step 1. Lead in**’. Each question is asked to the students who are grouped from A to E.

Questions for group A (Science-minded students):

- ✓ If you design a recycling factory how would it be?
- ✓ Where would you build a recycling factory?
- ✓ What purposes would you use at the recycling factory?

Questions for group B (Technology-minded students):

- ✓ How would you add technology in a recycling factory, if you were an expert?
- ✓ What aspects of technology would you use and or benefit in creating a recycling factory?
- ✓ What technological design would you use, if you create a recycling truck?

Questions for group C (Engineering-minded students):

- ✓ Where would you set the recycling factory and for what purposes?
- ✓ Who would work with building a recycling factory?
- ✓ What static design would you use in building a recycling factory ?

Questions for group D (Art-minded students):

- ✓ Can you design a poster for recycling to be known?
- ✓ Can you compose a song for recycling?
- ✓ What campaign would you run for recycling actively and correctly in your local community?

Questions for group E (Math-minded students):

- ✓ How can you define the right location of the recycling factory?
- ✓ What amount of energy can a recycling factory save?
- ✓ What calculation would you use?
- ✓ How do you calculate its cost?

The teacher first elicits the answers and then leads to the students taking actions and make a sample plant from papers and other materials.

**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 student learning.

**Evidence of Student Learning:**

Students' learning evidence will be the quotes, graphics, pictures, prototype, song, posters etc. that they improved during the lesson.

**Texts/Resources:**

Teacher uses the needy sources for the implementation of this lesson: The resources/texts are to be created by the teacher (Please see the annex 1 attached under the lesson plan, which are to be used for this lesson).

**Learning Activities:**

A series of tasks the student will engage in over the lesson. The activities are based on what students need to understand and be able to do for the performance and are aligned to the defined standards **“Recycling: Active ways to contribute to climate change”** and the essential questions defined under **“ Case section”**

**Practice:**

Teacher will deeply explain the negative effects of climate change and the role of recycling. Here, the teacher shall elaborate or describe the lesson using these prompts provided).

The teachers shall create a flexible learning environment for the students. Here, the teacher uses:

Warm-up: ask about the questions and make the students ready for learning for the topic-specific subject.

Practice: The teacher sets-up demonstration/modeling (I do-we do-you do)  
Studio/Rehearsal/Workshop (students engage in creating/planning/refining).

Clean-up: During the procedure, the teacher walks around the class and observes the students on what they need and control. If the students have questions, the teacher answers them.

**Suggested Extensions:**

- ✓ The teacher may arrange a visit to a recycling factory for the students.
- ✓ The teacher may provide a bulleted list of potential next steps or subsequent learning activities that will extend the teaching and learning of the students.