

*Creating an ECO online Natural Fit Virtual Programs to Prepare Students for
boostIng 21st century Skills 4 the Future (UNITY)*

2021-1-SE01-KA220-SCH-000032448

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

**LESSON PLAN 9: Food Waste Recycling
for fighting against climate change**

Presented by Eurasia Team

Lesson procedure:

Date:	__/__/__
Teaching staff:	Mr/Mss/Ms
Term:	2022-2023
Week:	1
Year Level:	Primary/low secondary
Time/length	3-4 hour.
Key Learning Area:	Use of soft skills for climate change and blending interdisciplinary subjects, including science, maths, art and social studies
Topic/focus:	Food Waste Recycling for climate purposes practically and SMARTLY.
Lesson Name: Use of waste textile for resource saving or efficient use of resources and transferring STEAM skills around PBL focuse.	
Foreseen Outcomes:	
At the end of this lesson, students will be able to:	
<ul style="list-style-type: none"> ✓ understand the roles and importance of environmental impact of food waste recycling and a result of massive consumption of food wasting. ✓ Understand why we should recycle food waste. ✓ To know what happens to food waste when it is recycled. ✓ design posters and brochures, relevant to waste and recycled food materials for the environment issues, ✓ explain how food waste recycling is good for the environment. ✓ improve their social skills, including group communication, interaction and discussion, improve their soft skills such as design thinking, critical thinking, decision making, efficient use of resources. 	
Lesson Description:	
This lesson shall demonstrate what is the waste textile is, What does textile waste do to the environment? How much textile waste is there? Why is food waste recycling important?	
What is food waste made of?	
Why we should recycle food waste?	
Pre-requisites to this lesson plan (not applicable):	
Length (Lesson procedure):	

This lesson will take 3-4 hour, which also includes interdisciplinary learning.

Depending on how to implement the planned lesson, the teaching shall need some materials, including videos, comics 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 waste production and recycling about the food. 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 recycling and reuse of food waste, and waste and recycled food materials used as building materials.
- ✓ Through creating and performing, Students will reduce the environmental impact of commonly used products by Recycling food are an excellent opportunity.
- ✓ Regarding this, it can be expected that understanding the role of the importance of environmental impact of food waste and a result of massive consumption of clothing.

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 side of the recycling and reuse of food waste, and waste and recycled food materials used as building materials The learning outcomes of the lesson shall be used by the students in their future careers. 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 waste food with STEAM skills?
- ✓ What are the connections of recycling and reuse of food e waste with PBL?
- ✓ How does food waste do to the environment and lead to 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:

1. Teacher writes food waste recycling on the board and read it to students then ask them to tell what they think the word means; then explain how food waste recycling is good for the environment. 2. Asks students to brainstorm a list of food they recycle at home or school as you write their responses on the board. Then explain that foods can be recycled too and that some schools participate in food recycling fundraisers to earn money for their schools.

'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 recycle food how would it be?
- ✓ Think about what you can do to contribute to food recycling?
- ✓ Where would you use the recycled food?
- ✓ Think about what other products could be recycled chemically?
- ✓ Would you choose to buy recycled food s? Why?

Questions for group B (Technology-minded students):

- ✓ How would you add technology in recycling waste food?
- ✓ What alternative methods can you think of for recycling waste food?
- ✓ What aspects technology would you use and or benefit in recycling waste food ?
- ✓ What technological design would you use, when you recycle waste food??

Questions for group C (Engineering-minded students):

- ✓ How do you recycle waste food?e?Which tools?
- ✓ What items can be recycled into waste food?
- ✓ Who would work with while recycling waste food?

Questions for group D (Art-minded students):

- ✓ Can you design a poster for increasing the importance of environmental impact of food waste and a result of massive consumption of food.
- ✓ Can you compose a song for sharing it?
- ✓ How can you design an advertisement for selling redesigned waste food?
- ✓ What campaign would you run for increasing the use of recycled food in your local community?

Questions for group E (Math-minded students):

- ✓ What kind of measurement tools would you use to measure products made of recycled food?
- ✓ How do you calculate its cost?

The teacher first, elicit the answers and then leads to the students take actions and leads to make sample designed, made of recycled food goods.(Materials can be brought by the students from their homes.

Skill focus:

During the lesson, Cognitive Skills, Decision Making, Problem solving, Creative Thinking and Interpersonal Skills will be the focus.

Content:

The content of the unit is based on the disciplinary or topic-area concepts.

Building Knowledge through learning by doing.

Assessments:

Describe the diagnostic, formative, and summative assessments employed in this lesson to gauge student learning.

Evidence of Student Learning:

Provide a list of the process documentation that you plan to acquire during the course of the lesson. These may include photographs of students engaged in learning, drafts of student work, quotes from students, interviews of students, video, etc.

Texts/Resources:

The collection of short and extended works aligned to the standards and content. Examples:waste food, texts, works of art, word wall, etc.

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“**Use of recycled waste food for against climate change**” and the essential questions defined under “ **Case section**”

Practice:

Teacher will deeply explain the the roles and importance of environmental impact of food waste and a result of massive consumption of food. 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.

Presentation of Work

Suggested Extensions:

Provide a bulleted list of potential next steps or subsequent learning activities that will extend the teaching and learning of arts content. Students could explore advanced topics in the area, research other artists and practitioners in the field, or develop either individual or group extensions, depending on the initial project.

