

*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 9:**

**Recycle clothes - Reduce textile waste**

*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>	Use of recycling ideas to reduce textile waste.
<b>Lesson Name:</b> Use of recycling ideas for energy saving and transferring STEAM skills.	
<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 properly our clothes for climate change,</li> <li>✓ communicate with public authorities, persuading them for taking initiative in recycling textile waste,</li> <li>✓ run small-scale campaigns, relevant to recycling clothes,</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 textile waste is, where the textile waste ends up, how it is created, where can we apply recycling ideas, how to think in an eco-friendly manner, what requirements are needed to recycle clothes, what you can do with clothes that you don't want or don't fit anymore.	
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, 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 renewables. 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, specifically clothing materials. Through creating and performing, the students will understand how we can get creative into recycling and reduce textile waste. Regarding this, it can be expected that understanding the role of reeling for climate change and the future of energy saving is proceeded.

### 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 the national program.

### Enduring Understandings:

The students will understand the core ideas and philosophy behind recycling, specifically clothing materials. 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 textile waste with STEAM skills?
- ✓ What are the connections of textile waste with PBL?
- ✓ How does recycling clothing materials lead to transferring 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:

Globally only just 12% of the material used for clothing ends up being recycled. 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 recycle your clothes, how would you do it?
- ✓ Where would you use the recycled textile?
- ✓ Would you buy second-hand-clothes? Why?

#### Questions for group B (Technology-minded students):

- ✓ How would you add technology in recycling clothes?
- ✓ What aspects of technology would you use and or benefit in recycling clothes?
- ✓ What alternative solutions can you find to recycle clothes?

#### Questions for group C (Engineering-minded students):

- ✓ How would you add technology in recycling clothes?
- ✓ Can all clothing materials be recycled?
- ✓ With whom would you work to recycle old clothes?

#### Questions for group D (Art-minded students):

- ✓ Can you design a poster for the impact of textile waste in climate change to be known?
- ✓ Can you compose a song for sharing it?
- ✓ What campaign would you run to increase eco-friendly conscience in your local community?

#### Questions for group E (Math-minded students):

- ✓ How can you measure the materials that the clothes are made of?
- ✓ What amount of water is needed to create a pair of jeans?
- ✓ How do you calculate the cost of recycling old clothes?

The teacher first elicits the answers and then leads to the students taking actions and making a poster with the most easy to recycle clothing 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 reducing textile waste 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 **“Recycle clothes- Reduce textile waste”** and the essential questions defined under **“ Case section”**

**Practice:**

Teacher will deeply explain the negative effects of climate change and the roles of solar energy for energy saving and skills transfer. 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 bazaar where the students can thrift clothes from each other.
- ✓ The teacher may make an art class where the students have to create something from old clothes.