

*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 1: Shaping Eco citizens

Presented by Osnovna škola Glina

Lesson procedure:

Date:	__/__/__
Teaching staff:	Mr/Mss/Ms
Term:	2022-2023
Week:	1
Year Level:	Primary/low secondary
Time/length	Project day (one school day)
Key Learning Area:	Use of soft skills for climate change and blending interdisciplinary subjects, including science, math, art and social studies
Topic/focus:	How to become an Eco citizens
Lesson Name: Shaping Eco citizens	
Foreseen Outcomes:	
At the end of this lesson, students will be able to:	
<ul style="list-style-type: none"> ✓ define “Eco citizen” ✓ describe how an Eco city should look like ✓ list types of renewable energy sources ✓ describe waste sorting and how it should be done ✓ design posters and songs, relevant to topic, ✓ 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:	
<ul style="list-style-type: none"> ● What is an Eco city? ● How should people become Eco citizens? ● How can a city become an Eco city? ● What are renewable energy sources? ● What is the objective of waste sorting? ● How to create an Eco city map? ● What can students do to make their city an Eco city? 	
Prerequisites to this lesson plan (not applicable):	

Length (Lesson procedure):

This lesson is organized as a school project day and will take 6 hour, which also includes interdisciplinary learning.

Depending on how to implement the planned lesson, the teacher will need some ICT materials (computers, tablets, etc.) and other materials including different recyclables for the Eco city model. The teaching staff shall follow the following steps to implement the lesson successfully:

Step 1. Lead in:

Teacher greets the students, and asks them to think what Eco city and after that who Eco citizens are. 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 understanding what Eco cities should look like and how Eco citizens should act.
- ✓ Through creating and performing, students will gain knowledge about Eco cities and becoming Eco citizens themselves.
- ✓ Regarding this, it can be expected that understanding of the topic will lead students to work on becoming Eco citizens and shaping their local communities as small Eco cities.

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 curriculum.

Enduring Understandings:

The students will understand the core ideas and philosophy behind the Eco city idea. Also they will find out what Eco city must have to become one. Students will understand the role of Eco citizens in everyday life. The learning outcomes of the lesson shall be used by the students in their future life and incorporated in their local communities. 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 is an Eco city?

How should people become Eco citizens?

How can a city become an Eco city?

What are renewable energy sources?

What is the objective of waste sorting?

How to create an Eco city map?

What can students do to make their city an Eco city?

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

Case section:

The teacher shall follow the following steps:

1. Teacher writes Eco city on the board and reads it to the students. Then he/she asks them to think and tell what they think the word means to them one by one. After that he/she does the same with the word Eco citizen.
2. Teacher asks students to brainstorm if they know any Eco city and why they think that city should be considered an Eco city. Students can give their answers freely by raising their hand.

'Step 1. Lead in'. Each question is asked to the students who are grouped from A to E. Each group should have a tablet or a computer.

Questions for group A (Science-minded students):

- ✓ Look for the definition of an Eco city?
- ✓ What each Eco city should contain to be considered an Eco city?
- ✓ What is your city missing to become an Eco city?
- ✓ Which building should be removed from your city to become a more Eco city?
- ✓ Who is an Eco citizen?
- ✓ What are in your opinion the 5 main characteristics of an Eco citizen?

Questions for group B (Technology-minded students):

- ✓ Research the types of renewable energy sources and write basic information about them?
- ✓ Research waste sorting and write important information?
- ✓ How should the traffic be organized in an Eco city?
- ✓ What are Eco city friendly vehicles?

Questions for group C (Engineering-minded students):

- ✓ What are solar panels and how do they work?
- ✓ What is a Hydro power plant and how does it work?
- ✓ What is a Wind farm and how does it work?
- ✓ What other buildings an Eco city might have?

Questions for group D (Art-minded students):

- ✓ Can you design a poster and a slogan for your city to become an Eco city?
- ✓ Can you compose an Eco city anthem and coat of arms of your Eco city?

- ✓ Research the internet and find a promo video of a city that has a label Eco city

Questions for group E (Math-minded students):

- ✓ Research the internet and find data about the number of sunny days, average temperature and humidity around the year, wind speed data. Create a chart with the data found.
- ✓ What is Ecological footprint?
- ✓ Use Ecological footprint calculator and calculate yours - [Footprint calculator](#)

When all groups are done each group presents their findings to the rest of the class. Students from other groups when each presentation is over are free to ask questions.

'Step 2. Make it real''

Using the knowledge gained from Step 1 students will make a model of an Eco city. For the model students will use recyclable materials like paper, plastic, cloth, etc. The model should be at least 70x50 cm long. It should contain all buildings and other parts that one Eco city should have.

1. Make a sketch of an Eco city
2. Create all segments using recyclable materials
3. Use cardboard for the city surface
4. Organize the city and make it real
5. Make a video of the model explaining why it is an Eco city.

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: recyclable materials.

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 "Shaping Eco citizens" and the essential questions defined under Case section.

Practice:

Teacher will deeply explain the roles and importance of environmental impact of making our cities Eco cities and becoming Eco citizens. 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:

Students can organize a meeting with the city mayor and present their final video product of their Eco city model. Students can present possible innovations in their local community so their city becomes more Eco city.