

***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***

Presented by ATLME

LESSON PLAN 5: The Ecological Footprint

Lesson procedure:

Date:	__/__/__
Teaching staff:	Mr/Mss/Ms
Term:	2022-2023
Week:	1
Year Level: 15- 18 years	High School
Time/length	Project class: 1 class (90m)
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 responsible citizens with ecological conscience.

Lesson 5 Name: The Ecological Footprint

Foreseen Outcomes:

At the end of this lesson, students will be able to:

- ✓ Define ecological footprint?
- ✓ What is environmental awareness?
- ✓ Describe different types of ecological footprint?
- ✓ Learn to measure the ecological footprint.
- ✓ 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:

- In this five lesson we are going to watch a film about the ecological footprints of several well-known people and how to measure them.
- Next, the teacher will ask the students to measure their ecological footprint and do the same experiment at home with their parents.

This lesson shall demonstrate:

- What is each person's "Ecological Footprint"?
- What behaviors can we change to improve our ecological footprint.
- How should people become Eco citizens?
- What are renewable energy sources?
- What can people do to help fight climate change?

Prerequisites to this lesson plan (not applicable):

Length (Lesson procedure):

- This lesson is part of a set of 10 lessons on this topic. In this five lesson we are going to watch a short video about ecological footprints of several well-known people and how to measure them.

Depending on how to implement the planned lesson, the teacher will need some ICT materials (computers and tablets).

The teacher asks the students, to to answer a questionnaire that will allow them to measure their ecological footprint.

Note: As grouping the students, the number of students can change according to the class-size.

Lesson standard:

- ✓ Throughout the lessons, students, with the help of teachers from different disciplines, develop skills and tools on how to be conscious and responsible citizens from an ecological point of view. The basic idea is: to help save the planet. We don't just think about ourselves, but also about those who are to come.
- ✓ 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 will connect and correlate the lesson with Education for Citizenship - Environmental Education that is part of the national education program for all grades.

Enduring Understandings:

At the end of each lesson, students will understand the entire philosophy that is adjacent to environmental education and ecological awareness that must be part of our lives and always present within our homes and communities as well.

- ✓ 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:

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?

What habits should they implement at home?

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

What does it mean to be "environmentally aware"?

- In the application of these classes, the teaching staff of this class prepares, in an interdisciplinary way, the various complementary activities to be developed in the various disciplines.

Case section: "Think Green....Make It Happen"

This case study will be developed over the course of 10 classes, with the various activities presented, which culminate in the exhibition of works of art created and in the workshop for secondary school students.

The teacher shall follow the following steps:

Step 1. Talk to the parents at home about the topic and together see what they can change from their day-to-day habits at home.

Step 2. Conduct an inventory of behaviors that can change in your school and community.

Step 3. Students will individually survey their "Ecological Footprint" through a short survey.

'Step 4. Make it real':

An exhibition in the School Library, with the various drawings they made on "Dangers of Global Warming"; with a film they made about good practices at home, in the community and at school, which they observed and recorded, making a short documentary about "Sustainability of the Planet." The documentary will later be presented, in a workshop to be held by the class in the school's amphitheater, on the theme: "Think Green....Make It Happen "where each of the students will talk about their experience of working on this project (10 classes), from what they managed to change in your home, your community and your school.

1. Make a sketch of good and bad environmental practices.
2. Create all segments using recyclable materials
3. Use cardboard for various images related to the theme.
4. Organize a book off good practices at home, community and school
5. Make a video of their experience and good practices.

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 and videos.

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 this whole problem. Case section.

Practice:

Teacher will deeply explain the roles and importance all the teachers in the class will support and help the students to understand the consequences of climate change and global warming. 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:

-An exhibition in the School Library;

- Workshop at school's amphitheater.

Suggested Extensions:

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

