

*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 6: sustainability means of transport for fighting against
climate change**

Presented by

Italy

Lesson procedure:

Date:	_22_/06_/2022_____
Teaching staff:	Science teacher, Technology teacher, Math Teacher
Term:	2022-2023
Week:	2
Year Level:	Primary school (fourth year) age: 10-11
Time/length	10 hours
Key Learning Area:	Science Education Technology Education Math Education Personal, Social and Humanities Education Life skills and values
Topic / Focus	Environmental impact - Sustainable mobility
Lesson Name: Biking and walking is better!!	
Foreseen Outcomes:	
At the end of this lesson, students will be able to:	
<ul style="list-style-type: none"> ✓ identify causes and consequences of climate change ✓ understand that our behavior has environmental impact ✓ reflect on the relation between the use of means of transport and the resulting CO₂ emissions and climate change ✓ reduce the traffic generated by accompanying children to school ✓ promote healthier and more sustainable lifestyles ✓ improve their social skills, including group communication, interaction and discussion 	
Lesson Description:	
<p>A brief introduction (2 hours) will be focused on the negative impact of the means of transports have on climate change. After watching two videos on the issue, the teacher will guide the discussion asking the pupils the following questions:</p>	

- What is climate change?
- Which are the causes of climate change?
- How does transport contribute to climate

change?

- How does transportation affect the environment?
- Is global warming a consequence of car pollution?
- What can we do to reduce the use of cars and other means of transport that are a serious damage for the environment?

Pre-requisites to this lesson plan (not applicable):

Length (Lesson procedure):

This lesson will take 2-3-hours

After the brief introduction and the related discussion, the pupils will be guided to understand how we can change our habits in order to reduce car pollution and the negative impact on the environment.

Step 1. Lead in:

The class will be divided into 3 groups.

The group n. 1 will be in charge of a survey on the distance from home to school for pupils.

The group n. 2 will be in charge of study routes from home to school by bicycle or on foot on a neighborhood plan.

The group n. 3 will organize the experimentation of groups of pupils who, under the supervision of an adult, go to school by bicycle or on foot.

Lesson standard:

- ✓ The lesson is standardized around STEAM-focused PBL for transferring 2021st skills for fighting against climate change. Here, we learn how to reduce air pollution due to the use of cars and how to go to school in a more independent and healthy way.

Common Core State Standards:

for the planning and implementation of the didactic activity)

Enduring Understandings:

The students will learn concretely:

- how to make a survey and graph the results
- how to plan round-trip routes from home to school based on children's home
- how to involve parents and grandparents in the project
- how to make all the inhabitants of the neighborhood aware of the utility of the project
- how to respect the rules of the traffic laws
- How to go to school with friends by cycling or by walking

Essential Questions:

- ✓ Is reducing CO2 emissions beneficial for the environment? Why? How?
- ✓ Is it possible to plan an alternative way to go to school by car? Could it be truly beneficial for the environment? Why? How?

Case section:

After the “work in groups”, the teacher shall guide a brainstorming, in order to reorganize all the informations that the pupils have obtained.

Afterward, all together, the pupils and the teacher will organize a certain number of “lines” (the green line, the red line, the yellow line) corresponding to the paths that will have been identified on the map of the town.

After presenting the initiative to families and citizens, the project can finally start!!!

Skill focus:

During the lesson, cognitive skills, decision making competences, problem solving skills and social skills will be activated.

Content:

The content of the unit is based on the topic-area concepts (Scienze, Technology, national and local laws). At the same time the teacher will ensure a student - centered approach in which pupils learn by working in groups to solve the problem.

Assessments:

- 1) Diagnostic assessment: brainstorming
- 2) Formative assessment: interviews and

open-ended questions

- 3) Summative assessment: the results of the team work, the involvement of each pupil in organize the paths to go to school by bike or on foot, the ability to argue the goodness of the project to families, citizens and other students of the school

Evidence of Student Learning:

During the lesson and the correlated activities, the following documentation will be acquired:

- photographs
- students work
- interviews
- video

Texts/Resources:

My Edu & MUBA - Mobilità sostenibile: <https://youtu.be/TVW1Fe4OK18>

1° Cartoon Settimana Europea della mobilità sostenibile: <https://youtu.be/OPqpwelyLz8>

Learning Activities:

During the activities undertaken in the framework of the lesson, the following Learning activities will be used:

- 1) Brainstorming
- 2) Brainwriting
- 3) Learning in group
- 4) Collecting data and informations inside the school and outside the school
- 5) Collaborative concept mapping
- 6) Peer review

Practice:

During the activities undertaken in the framework of the lesson, the teacher shall create a flexible learning environment for the pupils, through the use of the following strategies:

- 1) Warm up strategies
- 2) Circle time
- 3) Role playing
- 4) Cooperative Learning
- 5) Flipped Classroom

Suggested Extensions:



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