

*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 5: focus on 3Rs for fighting against climate
change**

Presented by

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Lesson procedure:

Date:	_15_/06_/2022_____
Teaching staff:	Science teacher, Technology teacher
Term:	2022-2023
Week:	1
Year Level:	Primary school (third year) age: 8-9
Time/length	5 hours
Key Learning Area:	Science Education Technology Education Personal, Social and Humanities Education Life skills and values
Topic / Focus	Environmental impact - Recycling
Lesson Name: 3 R: Reduce - Reuse - Recycling	
Foreseen Outcomes:	
<p>At the end of this lesson, students will be able to:</p> <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 consumption habits and climate change ✓ knowing the principles of waste reduction ✓ knowing the principles of recycling ✓ explain to younger pupils how recycling is good for the environment. ✓ improve their social skills, including group communication, interaction and discussion 	
Lesson Description:	
<p>A brief introduction (1 hour) will be focused on the topic: “climate change”. After watching a video on the issue, the teacher will guide the discussion asking the pupils the following questions:</p> <ul style="list-style-type: none"> ● What is the climate change? ● Which are the causes of climate change? ● Which are the consequences of climate change? 	

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 recognize that our behavior has important environmental impact through the following questions. After watching a video on the issue, they will be asked:

- What changes can I make in my life to fight climate change?

Step 1. Lead in:

To answer this question, class will be divided into 3 groups.

The group n. 1 will be focused on the word REDUCE

The group n. 2 will be focused on the word REUSE

The group n. 3 will be focused on the word RECYCLE

The teacher will provide each group with materials, articles, videos and each group will answer the question.

Lesson standard:

- ✓ The lesson is standardized around STEAM-focused PBL for transferring 21st skills for fighting against climate change. Here, we learn how reducing, reusing and recycling can help us and the environment.

Common Core State Standards:

The teacher shall correlate the lesson with the “Indicazioni nazionali per il curricolo” (the fundamental document in force in Italy since 2012 for the planning and implementation of the didactic activity)

Enduring Understandings:

The students will learn concretely:

1) how to reduce:

- Reduce food waste
- Compost at home

2) how to reuse:

- Reuse or repurpose items
- Buy used items
- Donate unused items
- Buy products made with recycled content

3) how to recycle:

- recycle right (each item in the right recycling bin, in accordance with the laws and the rules of the local and national community)

Essential Questions:

- ✓ Is reducing truly beneficial for the environment? Why? How?
- ✓ Is reusing truly beneficial for the environment? Why? How?
- ✓ Is recycling truly beneficial for the environment? Why? How?
- ✓ How does recycling save energy?
- ✓ How is it possible to know what local recycling options are?

Case section:

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

Afterward, each group will write a list of good practices to follow in order to reuse, reduce and recycle. The conclusions of each group work will be posted on the wall, so they are available for every student of the school, their families and all the members of the school community.

At the end of this activity, all the pupils will put in different zones of the school the apposite bins (to collect paper, plastic, food, glass) and will explain younger pupils (first and second year of primary school) how to recycle correctly.

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 (Science, 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 list of the good practices), the involvement of each pupil in organize the recycling activity in the school and explain to the younger pupils how it works and how much it is useful.

Evidence of Student Learning:

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

- photographs
- students work
- interviews
- video

Texts/Resources:

G. Ferrari: “Reduce, reuse, recycle”, 2022
AA.VV: “Cittadinanza globale e sviluppo sostenibile”, 2018
ZERO WASTE PRO: Kit per l’educazione nelle scuole, 2013
C.Gascone e S. Gatti: “I rifiuti e il riciclo”
<http://www.softwaredidattico.it/htm /giochi.htm>
<http://www.giochi-zone.org/giochi-online/454/clean-beach.htm> <http://www.flashgames.it/eon.html>
<http://www.flashgames.it/michael.go.recycle.html>

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:

Pupils could create a you tube video where they explain the causes of climate change and propose virtuous behaviors to fight against it

FIRST VIDEO: ([Il cambiamento climatico spiegato ai bambini](https://youtu.be/HKK9zKiR1_o)) youtu.be/HKK9zKiR1_o

SECOND VIDEO: ([#Ambienteascuola: Noi e il Clima - YouTube](https://youtu.be/ABMTg1R9cUI)) youtu.be/ABMTg1R9cUI