



TITLE:

Sustainability and Circular Economy.

GRADE LEVEL: 5th GRADE

STEAM AREAS: SCIENCE, TECHNOLOGY,
ENGINEERING

MATERIALS NEEDED:

- Notebook;
- Smartphone with charged battery;
- Writing material (pencil, pen and eraser);
- Water and snack;
- Comfortable clothes and shoes;
- Reusable bags;
- Garden gloves;
- Containers for collecting samples;
- Registration table.

OBJECTIVES:

- Understanding the destination of waste;
- Address problems related to sustainability, waste and environmental awareness;
- Making students aware of the importance of the Circular Economy;
- Raising students' awareness of being eco-responsible consumers.

PROCEDURE:

The main aim of the project is to integrate concepts of sustainability and the circular economy through practical outdoor activities, promoting environmental awareness and critical thinking. As well as encouraging students to become active advocates for sustainability in their communities.

Before the Outdoor Activities | Preparation and Engage | 90' + 45'

1. Write 3 expressions relating to the concept of sustainability and write 3 expressions relating to the concept of circular economy using Mentimeter;
 - a. Discuss the results of your brainstorming in a large group.
2. Clarify the concepts of sustainability and circular economy by watching the following videos:
 - a. Video "What is sustainability?" (<https://www.youtube.com/watch?v=zx04Kl8y4dE>);
 - b. Video "Explaining the circular economy: rethinking progress." (<https://www.youtube.com/watch?v=zCRKvDyyHml>).
3. In 5 small groups, search online, for information that answers the following questions (one different question per group):
 - What happens to the packaging that is put in the recycling bin?
 - Explain the concept of sustainability.
 - What are the stages of the packaging life cycle?
 - List 3 advantages of recycling.
 - Identifies 2 targets associated with goal 12 of SDGs.

PROCEDURE:

- a. Each group should post their answers on a digital Mural: "Sustainability and Circular Economy";
- b. Looking at the mural, share your opinions and suggestions for more sustainable behavior.

4. Briefing session on the outdoor activities to be carried out, the necessary equipment and safety rules.

Outdoor activities | 3 hours + 60'

1. Visit a waste treatment plant to understand how it works and its benefits.
2. Collecting waste outside the school or in the local community, using appropriate equipment.

After the Outdoor Activities | 4x 45'

1. After the 1st outing, write an article for the school newsletter about your visit with the aim of making the school community aware of the importance of more sustainable consumption.
2. After the 2nd outing, divide, classify and count the waste collected, making an Excel table with the results;
 - a. Each group, with different waste collected, creates a Sustainable Art Character;
 - b. Create an ID document for your Character (name, constitution, curiosities, 2nd life, etc);
 - c. Introduce your character to the class. We recommend an exhibition for the educational community.
3. Playing with mathematics:
 - a. If 700 aluminum cans make 1 bicycle, how many bicycles can be built with 22300 cans?
 - b. If 10 plastic bottles make 1 polar fleece jacket, how many bottles are needed to make 2 jackets for each member of your class?
4. After group reflection, the students define a specific action to which they commit to promote environmental sustainability in their daily lives;
 - a. To formalize this commitment, each student records their actions on a diploma.

ASSESSMENT:

- Formative assessment of the students, on recording grids, with a qualitative scale (group work and creativity);
- Evaluation of the activity, using Google Forms, with a quantitative scale and open questions.

REFERENCES:

- <https://sdgs.un.org/goals>
- <https://www.ellenmacarthurfoundation.org/>
- ucla.in/YouTube-UCLA