MODULE II

Lesson Plan 1

Summary

Title

Waste sorting and recycling: Creation of a recycling container.

Duration	90 min.
The age range of students	10 - 14 years.

Summary of the theme

Waste sorting and recycling are fundamental to sustainable waste management and environmental protection. This module will introduce students to the basics of waste sorting and recycling. In addition, they will make a craft to create a recycling bin.

Learning outcomes

Aim/Learning Objectives.

- To introduce students to the importance of waste sorting and recycling.
- To teach how to identify and classify different types of waste.
- Encourage creativity and the use of recyclable materials through a practical craft.
- Promote sustainable practices and respect for the environment.

Cross-cutting objectives

- Encourage students to protect the climate by reducing and recycling waste.
- Encourage collaboration and teamwork to achieve common goals.
- Develop practical and creative skills in making handicrafts.

Connecting Sustainable Development Goals

This theme is aligned with SDG 12 "Ensure sustainable consumption and production patterns" - Target 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse.

Implementation

Facilitation

- Before the class, ensure all resources are ready (internet connection, recyclable materials, scissors, glue, etc.).
- Always use recyclable or recycled materials.
- Extra cardboard boxes for possible failures.
- Show examples of correctly sorted waste to guide students.

Resources / Materials needed

- Empty plastic bucket.
- Two cardboard boxes per group.
- Silicone and silicone gun.
- Four colours of paint depending on the type of material to be recycled.
- Scissors.
- Markers.
- Hangers.
- Brushes.
- Pliers for cutting the hangers.
- Glue.

Ideas to continue

- Students can create more containers to be installed around the school.
- Organise a recycling campaign at school to put what you have learned into practice.
- Conduct visits to local recycling centres.

Source / Classroom materials and preparation

- Supporting sources on waste classification: Source 1 and Source 2.
- Sources of support on waste recycling: Source 1, Source 2 and Source 3.
- Supporting images on recycling (Annexes section).
- Recycling bin construction video to guide pupils: Video.
- Support activities:

  https://adayinourshoes.com/wp-content/uploads/Recycling-Activity-Sheet.pdf

Topic outline

Weather	Step-by-step instructions
10 min.	Introduction to the topic and explanation of the importance of waste sorting (Source 1 / Source 2) and recycling (Source 1 / Source 2 / Source 3): 1. Introduction: • Description: To present the importance of waste sorting and recycling for the environment and sustainable waste management. • Relevance: Explain how proper sorting and recycling help to reduce pollution, save resources, and protect the environment. • Examples: Show statistics on the amount of waste generated and recycled in different parts of the world. 2. Explanation: • Key concepts: o Types of waste: organic, plastics, paper, glass, metals, electronics. o 3R principles: Reduce, Reuse, Recycle. • Activity: Discuss examples of common waste with students and how they should be classified.
10 min.	Divide the students into groups, prepare the material, and explain the project.
25 min.	Making the craft to create the recycling bin. Part 1 (Video): 1. Construction: • Description: Guide students in the creation of the recycling bin. • Steps: o Assemble the base structure of the container using the cardboard boxes. o Cut the hangers with pliers to create the frame of the container. o Use the silicone gun to secure the parts of the container. • Activity: Students should work in teams to complete the first part of the craft.
25 min.	Making the craft to create the recycling bin. Part 2 (Video): 1. Decoration and Completion: • Description: Complete the creation of the container and decorate it. • Steps: o Paint the container in the appropriate colours for each type of waste.

	○ Label each section of the container to indicate which type of waste should be placed in which section. ○ Add decorative details using recyclable materials. • Activity: Students should finalise and decorate the container, ensuring it is functional and attractive.
10 min.	Presentation and discussion of the containers created by the students.
10 min.	Reflection and summary of what has been learned, questions, and answers.

Formative evaluation

- Classroom observations and oral questions during the elaboration of the recycling bin.
- Evaluation of the containers and group presentations, in which a brief discussion is held among the other groups to highlight the strengths of the project presented by the others.
- Use of the reinforcement activities attached in: https://adayinourshoes.com/wp-content/uploads/Recycling-Activity-Sheet.pdf

Feedback

Net Promoter Score (NPS) is a widely used tool to measure the loyalty and satisfaction of customers or, in an educational context, students. It measures the likelihood that students will recommend the subject or course to others.
How to analyse and apply NPS is explained below:

Development of the NPS question:

- Main question: "On a scale of 0 to 10, how likely are you to recommend this topic to other students?
- Follow-up questions: "Why did you select this score?" and "How can we improve this issue?

Collection of responses:

- Digital surveys: Use online tools such as Google Forms, SurveyMonkey, or Typeform to collect student responses.
- Paper surveys: Paper questionnaires are distributed at the end of the lesson for students to complete. A template for collecting responses with paper surveys is shown in the Annex.

- Interactive applications: Interactive applications such as Quizziz, Mentimeter, or Kahoot! are used to collect answers in real time.

Classification of responses:

- Promoters (Score 9-10): Students are very satisfied and likely to recommend the subject.
- Passive (score 7-8): Satisfied but not enthusiastic students; they could easily change their minds.
- Detractors (Score 0-6): Dissatisfied students who are unlikely to recommend the subject; they could provide constructive criticism.

Calculation of NPS:

- Formula: NPS = % of promoters - % of detractors.
- Score interpretation: NPS ranges from -100 to +100. A positive score (above 0) is generally good, and a score above 50 is excellent.

Analysing and using comments:

- Review the comments to understand the reasons behind the scores.
- Identifies patterns and specific areas for improvement among detractors and passives.
- Use the promoters' positive comments to reinforce the positive aspects of the issue.

Annexes

Supporting images on recycling to print or display on a screen:



Figure 2.1.1: Support figure. Source: Maquituls. Link:
https://www.maquituls.es/noticias/que-es-y-para-que-sirve-el-reciclaje/

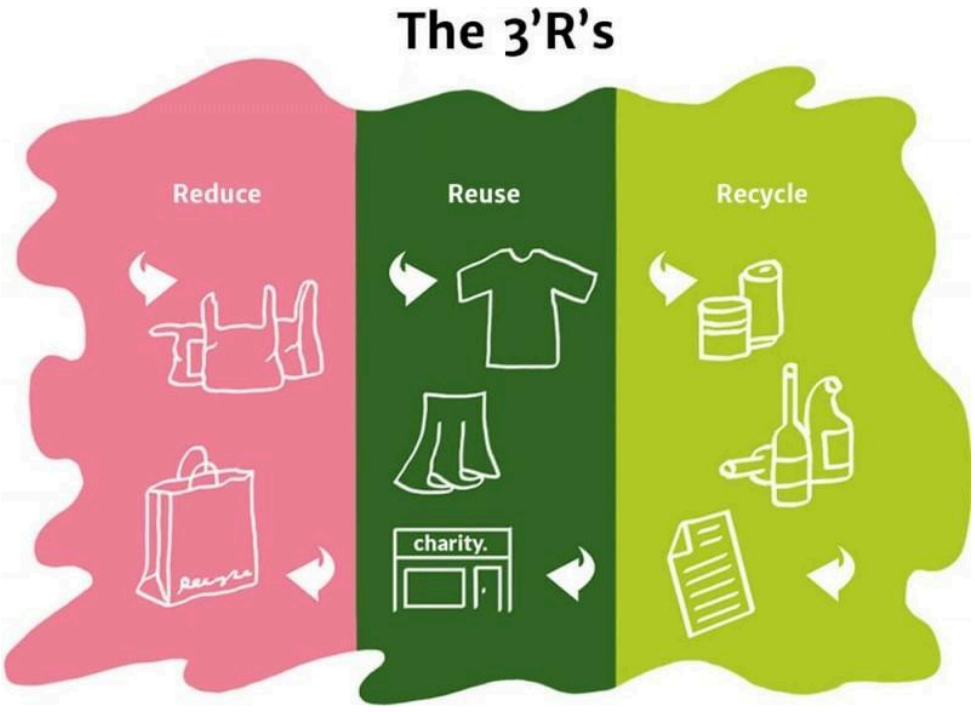


Figure 2.1.2: Support figure número 2. Source: Solar Schools. Link:
https://solarschools.net/knowledge-bank/sustainability/reduce-reuse-recycle

QUESTIONNAIRE TO COLLECT FEEDBACK ON THE TOPIC

On a scale of 0 to 10, how likely would you recommend this subject to other students?

0	1	2	3	4	5	6	7	8	9	10

Not likely at all Extremely likely

Why did you choose that score?

How could this issue be improved?