SP-DS02-IN07

PART A: PLANTING TREES IN THE SCHOOL

PART B: VISIT TO THE NATIVE PLANT GREENHOUSE OF ARBA / TRES CANTOS (ASSOCIATION FOR THE RECOVERY OF THE NATIVE FOREST)

Primary school

Resources	
Human	
Time	
Costs	€ €

This intervention consisted of a planting session in the schoolyard, where the children learnt about the benefits of plants and how to plant and care for a tree. Working in groups of five or six with an adult supervisor, the children carried out tasks such as digging the planting hole, removing the plant from its pot, placing the plant in the hole and filling it with soil, and watering. This intervention took place over two sessions. The first session involved tree planting and included a workshop on planting procedures and the environmental benefits of native vegetation. The second session involved a visit to the ARBA greenhouse, where there were workshops on greenhouse and plant nursery work, identifying plant species (including medicinal plants and their healing properties), and composting organic matter from vegetation for use as fertiliser.

Around 70 fourth-grade primary school students, three teachers and two CIEMAT researchers attended both sessions.

Objectives:

- ★ *Individual competences: Learning to plant and care for various trees and bushes, fostering positive attitudes toward plant maintenance, and understanding vegetation's environmental significance.*
- ★ *Collective competences: Promoting cultural awareness of plants' roles in carbon sequestration, climate change mitigation, oxygen production, biodiversity enhancement, soil conservation, and erosion prevention through participatory learning.*
- ★ *Environmental performance: Plantations aimed at improving microclimate regulation and sustainability within schools and urban areas.*

Relevant difficulties

It is crucial to prepare the land before planting in order to ensure the success of the activity. In our case, the city council cooperated by sending its gardeners to the school to help dig the holes; without their assistance, the activity would not have been possible. It was the school leadership who dug the holes for planting.

The limited space available for planting posed a challenge to the efficient organisation of the planting areas, which caused some difficulties during the activity. Students had expected to plant in an urban garden, so they were surprised when the planting took place on school grounds instead. Additionally, many students did not expect to be directly involved in the planting, resulting in an unexpected yet positive interaction with nature.

A lack of curiosity, responsibility and motivation among some students could hinder the effectiveness of the intervention. Without sustained interest and commitment, tree planting efforts could become short-term actions rather than impactful, lasting solutions. Furthermore, inadequate explanations from teachers and distractions affecting student performance emphasised the importance of clear communication and structured activities.

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Individual Competences	Collective Competences	Technical-Material Competences
✓ Knowledge and skills on how to plant vegetation (trees and brushes) ✓ Positive attitudes toward vegetation. ✓ Increased knowledge and awareness of the relevant environmental role of vegetation	✓ Effective logistics and organisation, and valuable long-term collaboration with ARBA. ✓ Good organisation and clear instructions from the school management contribute to students' motivation and participation. ✓ Inspirational leadership (headmaster's active engagement) ✓ Participatory learning experience	✓ Measuring concrete CO2 uptakes ✓ The plantations help regulate the microclimate, increase biodiversity and improve soil conditions at school and in the city. ✓ Estimated carbon sequestration: 95 kg CO2/year.

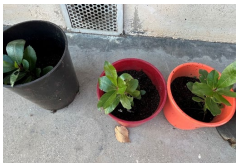
Additional information:

https://drive.google.com/drive/folders/1lATkp_xMOzNjxP_6WQX81PRK1GkcV__m?usp=sharing

★ List of average carbon capture per year by plant species
★ Educational materials on how to carry out planting at school by children
★ Educational material explaining the environmental benefits of vegetation.

https://arba-s.org/

https://www.arba-trescantos.org/



Sustainability competences in place in the intervention

Engagement

- Students gained important environmental knowledge and developed a sense of responsibility for caring for the plants.
- Students felt reassured and motivated knowing that their involvement directly contributed to the benefit of the environment, in particular by reducing around 80kg of CO_2 emissions.
- The knowledge that their efforts were having a tangible impact on the environment further enhanced the students' motivation and sense of purpose during the intervention.
- The fun and engaging nature of the planting activities helped to maintain a high level of student interest and participation.
- Good organisation and clear instructions from the school management contribute to students' motivation and participation.

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Connections

- Understanding the roles of trees and vegetation in the carbon cycle
- Students became aware of the various environmental benefits of vegetation: biodiversity improvement, soil conservation, and microclimate regulation.

Change

- Knowledge about possible ways to reduce environmental impacts, both at the local and the global level.
- The engagement of three different school levels in the intervention and the preparation of the video for the ECF4CLIM Best Intervention Award (BIA) helped to generate a collective vision on ways to achieve transformational changes.

Action

- The students learnt about the importance of vegetation and developed strategies for looking after their family's plants at home.
- The motivating presence of the school headmaster significantly influenced the positive outcome.
- The necessary materials were gathered efficiently, enabling even the most restless students to engage and concentrate.
- Measures taken by the school leadership, including the introduction of an irrigation system, effective information dissemination and growth incentives, proved to be essential for the sustainable success of the intervention.

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