ERASMUS+ GOOD PRACTICE FACTSHEET

"The school garden as an ecosystem simulation»"

From European Experience to School Application and Local Action

Organisation: Kouloura Primary School (Greece)
Sector: School Primary Education **Project code:** 2021-1-EL01-KA120-SCH-00004395
Key Themes: Erasmus+, School Education, Geoinformation Systems (GIS), Earth Observation Sustainability, Sustainable Development, Environmental Responsibility, Climate Change, School Garden, Ecosystem, • Intergenerational Knowledge Transfer, Dissemination, Transferability, Integration
Digital Deliverable: Presentation / visual storytelling (with English Subtitles – OER)
Link: PDF 1 https://docs.google.com/presentation/d/1vmPdrQN9OKz9uxsCn1_qk-WUXvkjNydt/edit?slide=id.p1#slide=id.p1

1. Title, Philosophy & Context

Project Name: Earth Observation for Education (EO4Edu) / Erasmus+ Accreditations (Presentation)
Core Theme: Integrating Geoinformation Systems (GIS), Earth Observation tools (Google Earth Timelapse, KoBoToolbox, Calliope minicomputers), and sustainable agricultural practices into the educational process and local community.
Target Audience: Students, teachers, local agricultural cooperatives, parents, and regional educational stakeholders.
The Philosophy & Rationale: In an era shaped by environmental challenges, energy crises, threat of poverty and a lack of basic goods and essentials, returning to the primary production sector (Agriculture) with modern, eco-friendly methods is an act of resilience.

The Core Belief: "With Erasmus+, not only people travel, but also ideas, values, knowledge, and experiences."

2. Project implementation stages

STAGE 1: Formation, Preparation, and Restoration of the Space (Our Garden)

Objective: Cleaning, recreating, and redesigning the school environment (schoolyard, raised beds, garden).

Activities:

- Soil clearing and construction of raised beds with the active participation of students,teachers and parents.
- Teamwork and collaboration to create a welcoming, aesthetically harmonious natural environment within the school.

STAGE 2: Familiarization with Earth Care and Connection to tradition.

Objective: Students' direct contact with the physical soil, introduction to plants, and cultivation of a foundational relationship with the primary sector.

Activities:

- Planting aromatic herbs, flowers, and local varieties.
- Introduction to plant classification, systematic botany, and the importance of preserving traditional seeds.
- Practical exercises in watering, caring for, and performing basic maintenance in the garden.

STAGE 3: Integration of Technology and Conservation of Natural Resources (Erasmus+ Know-how)

Objective: Leveraging knowledge acquired through European Erasmus+ mobilities (such as the EO4Edu project and tools provided by partner universities – AUTh, Bochum and Charles University).

Activities:

- Using educational microcomputers (Calliope mini) and soil moisture sensors to measure plant growth conditions.
- Implementing methods for rational water management and resource conservation (e.g., simulating irrigation systems and studying technology's impact on agricultural production).

STAGE 4: Ethical & Sustainable Development

Goal: Understanding and raising awareness (climate change, pollution, extreme weather events).

Activities:

- Use of digital tools (such as Google Earth Timelapse and KoBoToolbox).
- Discussions and actions (limiting pesticides, genetically modified products, protection against natural disasters, mitigating the environmental footprint).

STAGE 5: The Garden as an Ecosystem Simulation / Holistic Application

Goal: The culmination of the educational process, where the school garden transforms into a living "ecosystem—a microcosm of Earth."

Activities:

- Students simultaneously apply all skills related to respect, protection, and ethical management (ecological balance, sustainability, prudent use of natural resources).
- A combination of STEM/STEAM, art, technology, and environmental ethics, treating the garden not merely as a cultivation space but as an integrated framework for life and sustainability.
- Parallel actions: Creation of artistic and literary works (e.g., writing stories featuring scarecrows to address the climate crisis and extreme weather events; visual art projects highlighting environmental issues through the use of fairy-tale characters; using Art to raise awareness about issues such as fast fashion...).

STAGE 6: Outreach, Dissemination, and Reversing Intergenerational Mentoring

Goal/Actions:

Transferring the knowledge generated by our students to:

- their peers (students from neighboring schools and European partner schools—via exchange visits, job shadowing, and group pupil mobility);
- the wider community (parents, local farmers—distributing cultivated plants and flowers to families and local residents, etc.)
- local agricultural cooperatives, agronomists, and relevant organizations regarding the role of technology in sustainable agriculture;...thereby reversing the traditional learning dynamic (with young people guiding older generations).

4. Mapping Actions to Erasmus+ Priorities

Erasmus+ Priorities	Project Actions & Implementation
1. Environment and Combating Climate Change (Green Transition)	• School garden restoration and biodiversity monitoring. • Use of Google Earth, Timelapse and KoBoToolbox to study global warming and local climate shifts. • Environmental storytelling, awareness books, and art projects on extreme weather and natural disasters.
2. Digital Transformation	• Integration of micro-computers (*Calliope mini*) and coding in daily school practice. • Utilization of geoinformation systems (GIS), digital mapping tools, and open educational platforms.
3. Inclusion and Diversity	• Active participation of all students regardless of background through hands-on STEAM activities and collaborative garden work. • Intergenerational inclusion bridging students, parents, and elderly local community members.
4. Civic Engagement and Active Citizenship	• Direct engagement with local authorities, agricultural cooperatives, and regional stakeholders to promote sustainable farming. • Dissemination events, multiplier workshops, and regional teacher training seminars.

"This Good Practice successfully transforms Erasmus+ project outputs into a highly transferable, scalable, and cross-curricular learning model. It seamlessly integrates environmental education, digital literacy, and early career orientation in Primary Education, actively engaging families and the local community with measurable, reusable outcomes (recycling, reuse, pesticide use, etc.)."