



**CHALLENGE-BASED  
EXPERIMENTATION  
ON BIODEGRADABLE  
RECIPES IN LOWER  
SECONDARY  
EDUCATION**

# 2025 SUCCESS STORIES

**FROM LEFTOVERS TO LEARNING –  
BRINGING BIOECONOMY INTO SCHOOLS**





# INTRODUCTION

We set out to make bioeconomy real for lower-secondary learners. Not as a slogan, but as a sequence that any teacher can run and any student can understand: Make – Test – Share. Over 18 months, RHIZO, Lappeio 1st Gymnasio and EDUQUEST built that sequence end-to-end and used it on camera, in class, and across two countries.

We began with a spark. On 6 November 2024, students from Lappeio visited INCOMMON's Kyklos Laboratory in Thessaloniki, a space that tests circular economy at neighbourhood scale. Short videos, hands-on prompts and a frank discussion about resource use turned “circularity” from a buzzword into concrete examples the students could recognise in their own routines. That visit set the tone: direct, practical, and close to everyday life.

## MAKING BIOECONOMY PRACTICAL

The team curated and filmed a set of short recipe videos that show, in plain language, how everyday residues as citrus peels, starches, glycerin, can become simple bio-materials. The clips are quick on purpose: teachers and students see the process in under two minutes and can decide, on the spot, whether to try it. Every post links to full instructions and safety notes. Publishing on Instagram, Facebook and LinkedIn kept the rhythm steady and made the work easy to share with colleagues and parents.

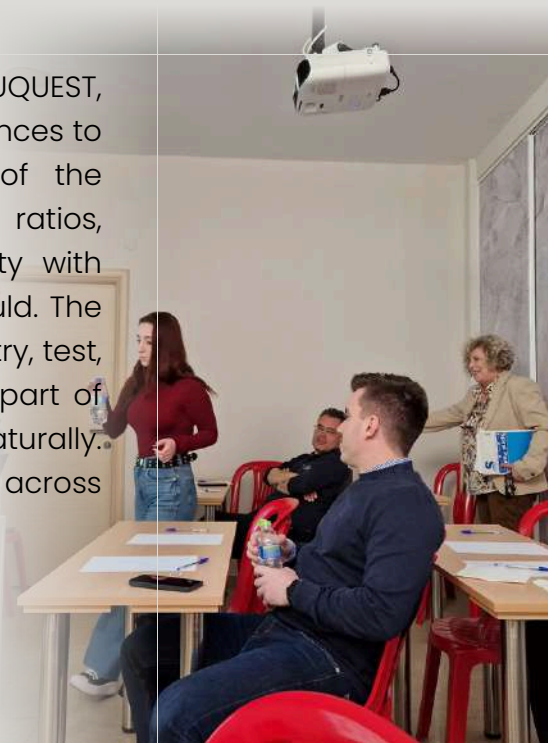
The RECIBIOS Playbook translates the idea into teachable steps. It is compact and practical: learning goals up front; a four-lesson flow; materials and safety; simple rubrics; and the ten recipes embedded where they are needed. We produced the master version in English and localized it into Greek and Dutch so that teachers could pick it up without friction. The Playbook became the common reference of what to do first, what to measure, where to look if something fails.

# WORKING WITH TEACHERS

We worked with teachers, not around them. In February and March 2025, partners ran two in-country teacher trainings, one in Belgium, one in Greece. The design was the same in both places: a half-day to align on concepts and classroom aims; a hands-on micro-lab to rehearse key steps; and a session on assessment and documentation so that “experiments” become investigations. The format is lightweight, but the point is serious: build confidence, establish a shared method, and make sure support does not end when the workshop does.



We moved into classrooms. With mentoring from EDUQUEST, teachers in RHIZO and Lappeio delivered the Playbook sequences to 12–14-year-olds, turning the lab bench into a corner of the classroom. Teams cast thin films, adjusted glycerin ratios, compared drying times, measured thickness and flexibility with simple tools, and kept notes the way a small workshop would. The focus was not perfection; it was repeatability and evidence: try, test, record, improve. In Naoussa (a place where agriculture is part of daily life), the conversation about waste and value landed naturally. In Kortrijk, the emphasis on method made comparison across classes possible.





# CROSS-BORDER LEARNING

We took the work across borders. From 30 November to 7 December 2024, six students and two teachers from Lappeio travelled to RHIZO in Kortrijk. Beyond cultural visits in Brussels, Bruges, Ghent and Ypres, the centrepiece was joint lab work: mixed Greek-Belgian teams following the same protocol, arguing (productively) about drying times, and comparing water-resistance tests. The return leg, 10–13 May 2025 in Naousa, brought RHIZO students and teachers into Greek classrooms and local contexts. The two-way exchange mattered for a simple reason: methods harden when they travel. By the end, students were working like small R&D squads, planning, testing, and backing claims with data.

We opened the door to others. On 22 January 2025, RECIBIOS joined a co-creation session at Stanislas Pro (NL) with the Innovation Agency DOON to present the Playbook and explore collaboration. Throughout the year, partners kept up a steady flow of social posts (short reels, lesson snapshots, and simple reflections) so that teachers outside the consortium could lift an idea in minutes, not hours. Visibility here is not vanity; it is how practices move.

We closed the loop with a public conversation. The partnership planned a hybrid closing event in Kortrijk (3–4 September 2025) to showcase the pathway, what worked, where we had to adjust, and what another school needs to adopt the model the following term. The format is practical: a short core programme, two brief demos, and time to ask hard questions. The Playbook and video recipes are the leave-behinds; the method is the takeaway.



# OPENING THE DOOR & WHAT REMAINS

Across these steps, the thread is consistency. A student watches a ninety-second clip, then meets the same idea in a Playbook page, then carries it out over four phases, then sees peers apply it in another country, then finds the reference again in a public talk. Nothing here is elaborate. That is the strength. Simple materials, clear steps, light tools, and honest testing repeated often enough to become a habit for teachers and a mental model for students. The result is less about a single prototype and more about a stance: leftovers are resources; practice beats theory-only; evidence is part of the work.

RECIBIOS did not try to be everywhere at once. It stayed inside a tight pre-planned loop. We now leave behind a Playbook in three languages, a set of videos that lower the barrier to entry, teachers who have run the sequence and know where it sticks, students who have seen their work travel, and a network of peers who know exactly what to borrow. From leftovers to learning—and from a video to a lesson to a habit.



**200+ students**

**Over 3000 views  
on social media**

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