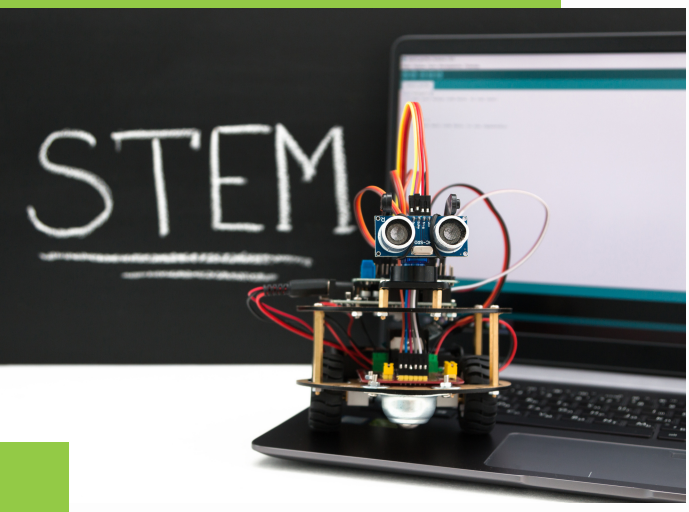
WHAT'S INSIDE

EU PROJECT RESULTS & MILESTONES

STAY TUNED FOR THE 40-HOUR TRAINING THAT WILL TAKE PLACE IN OCT-NOV 2021!



Green STEAM Incubator

Erasmus+

JUNE 2021

AGRO-ENTREPRENEURSHIP & SMART AGRICULTURE

The Official Newsletter of The Green STEAM Incubator

THE GREEN STEAM INCUBATOR

STEM SKILLS CENTRAL TO INNOVATION

Youth Entrepreneurship plays a catalytic role in converting STEM advances and innovations into public benefits, thus carrying the ability to create social and environmental value in societies.

Our educational materials aims to encourage positive environmental behaviours, such as conserving, protecting and restoring the local communities. The methodology attempts to highlight the benefits of designing and developing eco-friendly products and services which might stem from various STEM disciplines.

The project's ultimate goal was to foster activities interwoven with the sector of permaculture and organic farming, thus promoting a cross-sectoral, collaborative scientific learning experience for young people (18-35 years old).

A FRUITFUL PARTNERSHIP

VISION, COLLABORATION & EXPERTISE

The project was coordinated by **CIP Citizens In Power** with experience in STEM and Entrepreneurship development. The organization has materialized a variety of innovative projects around youth empowerment and entrepreneurship (such as Grow Green, Escape Rooms, FLYie) and on school education and Policy Reform (Infomath, VR Maths, STEAMER, Living STEM, EdComix etc).

CITIZENS IN POWER

Center for Social Innovation

Centre for Social Innovation (CSI) is a Research and Development organization with a focus on fostering social innovation and bring positive change to local and international contexts. CSI addresses systemic challenges through their programs around youth and disadvantaged group empowerment (REACH YOUth, Children First, Senses, ProWell etc) and entrepreneurship (URBFARM, WECAN, Passionpreneurs, EKS, Radial, The missing entrepreneurs, IBL etc).

CSPE

LogoPsyCom

Logopsycom, as pedagogic innovation centre, is specialised in alternative tools – digital or not – for the inclusion of all students, particularly those with Specific Learning Disorders (SLD). Relevant innovation projects around STEM and gamefication are Escape Rooms, Living STEM, Math Reality, The Art of Maths.

CEPROF is involved in projects related to the fields of agriculture, permaculture, STEM and climatic changes, similar to the areas of the Green STEAM incubator.

Project Number: 2019-3-CY02-KA205-001692

Green STEAM Incubator

SMART AGRICULTURE

MICROCONTROLLERS & 3D DESIGN

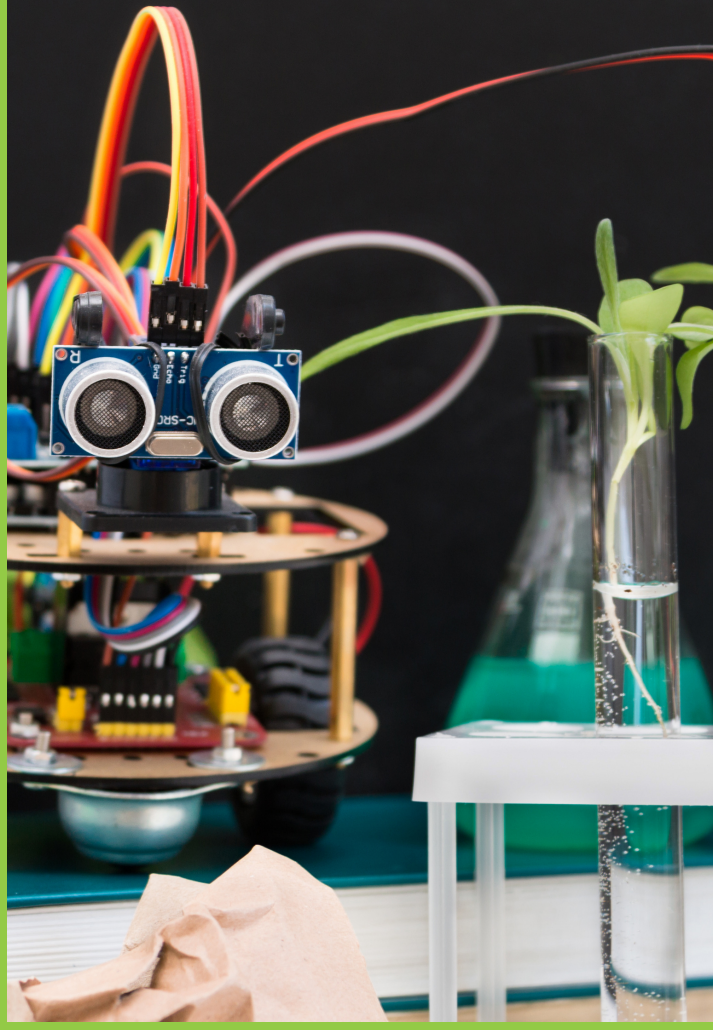
The program via Outputs 3 & 4 promotes STEM-oriented knowledge, through the provision of essential modules and practical examples, on Microcontrollers (Robotics/ coding/ Arduino/ etc.) and 3D-Modelling with the ultimate goal the creation of eco-friendly solutions & products and other environmental projects that could eventually serve agro-entrepreneurship, social entrepreneurship and environmental sustainability sectors.

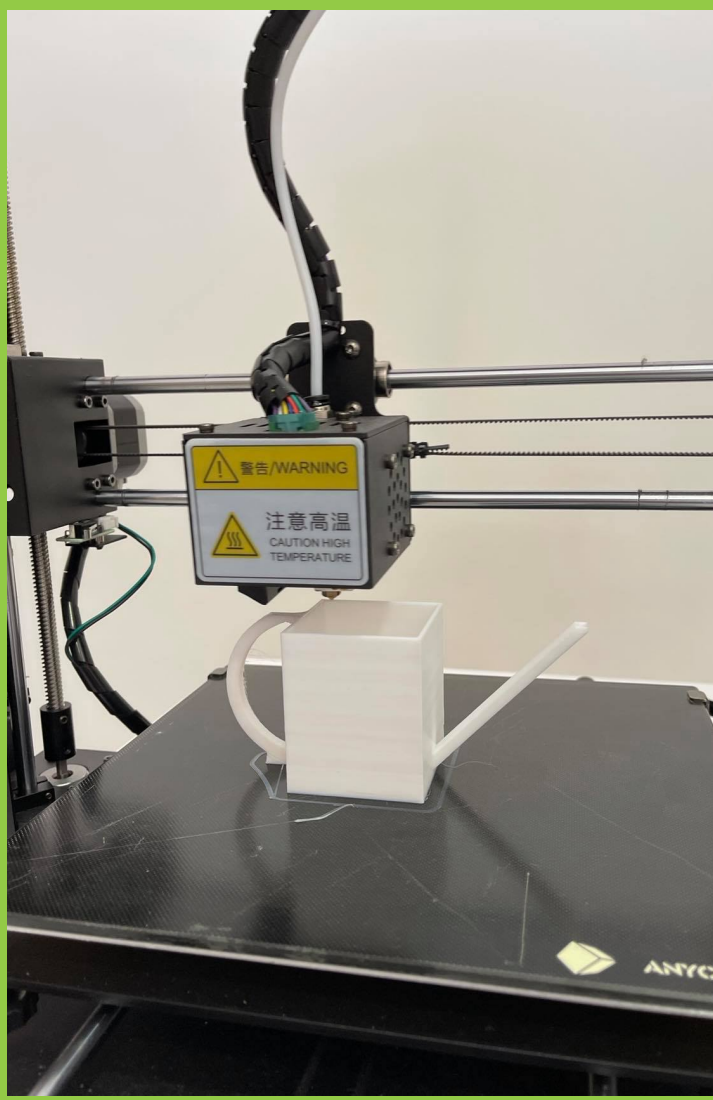
In June 2021, **C.I.P Citizens in Power** and **CSI Center for Social Innovation** completed the C1-pilot testing activity of the educational material on microcontrollers and 3D printing design and a 2-day activity testing in Riverland Bio Farm where via our Activities and Treasure hunts learned about smart agriculture and how technology can be used to maximize yields and profits for farmers, the benefits of conventional farming vs organic farming, the benefits of GMOs, community gardening and the use of permaculture and the different types of composting.

We have alsoexplored the technologies and renewable energies Riverland is using to support their work and the environment synergistically.

"We aspire to set a fertile ground for the promotion of social enterprises, agro-businesses and start-ups, capable of utilising recent technological innovations."

The consortium





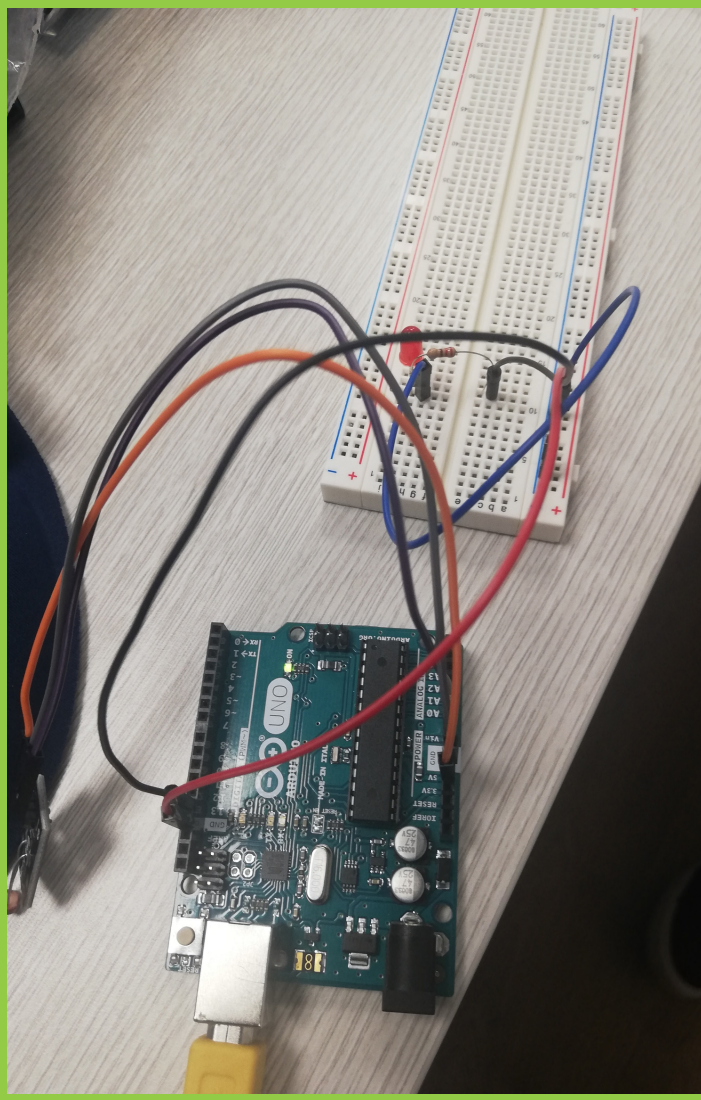
Logopsycom organized its C1-pilot testing activity of the educational material on microcontrollers and 3D-printing design on the 19th and 20th of August. The participants were invited to discover the modules on microcontrollers and 3D-printing design. They had the opportunity to discover the creation of environmental projects developed in the two modules. They developed an alarm for a henhouse and a water tank, and they designed and printed a shovel in 3D.

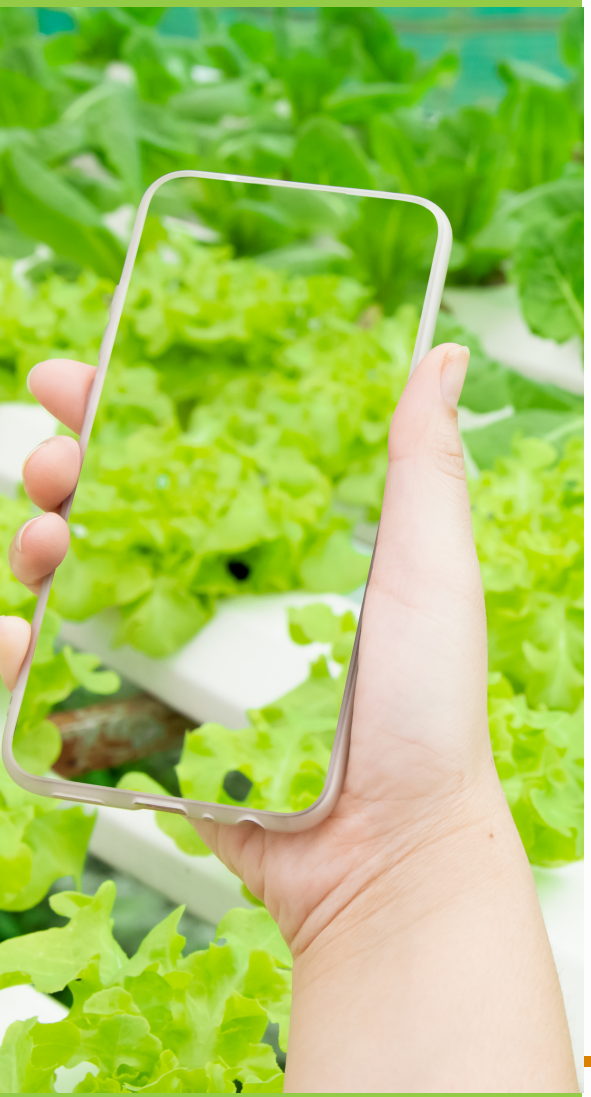
It allowed participants to discover the new pedagogical approaches and the implication of STEAM technologies in the agricultural sector.

CEPROF completed the C1 activity in the first two days of July. They also tested the microcontrollers and 3D Printing material by dividing the participants into two groups dedicated to the two themes. The group participants working on microcontrollers learned how these materials can easily be applied to agriculture and how they can help reduce consumption costs. They easily learnt how to use materials such as a weather station and a soil pH sensor, all with the help of a microcontroller.

The group learning about 3D Printing discovered how this technology could produce high-quality materials to improve agriculture productivity. Having that in mind, the participants designed a rake and a vase on 3D printing software and then watched the two objects printed in real-time.

This activity was a great pedagogical way for everyone to see how agriculture and STEM are two big areas that can be intertwined.





PROJECT RESULTS

OUTPUT 1: The Green STEAM Incubator Manual

Provides a framework on how to create collaborative affiliations among youth organisations, relevant stakeholders and agro-businesses, based on concrete action plans and methodologies.

OUTPUT 2: The on-the-spot gamification of The Green STEAM Incubator

We developed treasure-hunts, quests and a board game that aspires to interlink permaculture, green-entrepreneurship and environmental education.

OUTPUT 3: Education on Microcontrollers

An introductory 30-hour module/Handbook on Microcontrollers (Robotics, Basic Software e.g. Arduino, logic gates, Internet of Things and Raspberry PI) with eco-friendly and high-tech green solutions.

OUTPUT 4: Education on 3D Modelling

An introductory 20-hour module/Handbook on 3D-Modelling of Objects using software with interlinked environmental projects and "Design Thinking Models" to move from a prototype to a final product.

OUTPUT 5: Exhibition of Final Products and Services

A digital exhibition drawn from previous work that brings to life the proposed eco-friendly projects in the context of national Green STEAM Incubators with the aim to sensitize the public on the range of possibilities that STEM-oriented fields provide for sustainable and green communities.

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