WEBINAR: WORKING DAY ABOUT ERASMUS + PROJECT 'DOMOTIC SCHOOL GARDEN'. AENVIRONMENTAL SUBJECTS IN PRIMARY EDUCATION (SENSORS AND WEATHER STATIONS IN AGRICULTURE, ECOLOGICAL AGRICULTURE, BIOLOGY, BOTANY, SUSTAINABILITY AND AGENDA 2030).

OBJETIVES

1) The "Domotic School Garden" project will develop the domotization of an ecological school garden by developing the students' competencies in STEM (Science, Technology, Engineering, Mathematics and Art), linguistic competence (English), and integrating transversal values in all its development.

2) The development of competencies in STEM requires that the student take the theoretical knowledge acquired in the classes, to practice in an environment where learning develops naturally and practically and where the student participates in the teaching-learning process , achieving significant learning.

3) As horizontal priorities, the project wants to contribute to the environmental and climate objectives, ensuring that students understand in a practical way how natural systems function in an environment such as the garden, and how these are affected both by the ecosystems that are generated around them, as well as by the climate, and the importance that this has in sustaining life on the planet.

4) Therefore, it will also be possible to analyze the risks derived from climate change as a global threat, which they will be able to make visible directly from the management of the school garden.

5) In addition, it is intended to highlight to students the opportunities that arise from the intelligent use of technology, which allows us to achieve a better use of resources and, thus, improve our resilience to climate change for the future.

These conferences have been subsidized by means of a RESOLUTION OF THE DIRECTOR GENERAL OF SCIENCE AND RESEARCH BY WHICH SUBSIDIES ARE GRANTED FOR THE ORGANIZATION AND DISSEMINATION OF SCIENTIFIC, TECHNOLOGICAL, HUMANISTIC, OR 2021 CONCLUSION OF RESOLUTION ARTICLES OF CHARACTER. NOVEMBER 20, 2020, FROM THE MINISTRY OF INNOVATION, UNIVERSITIES, SCIENCE AND DIGITAL SOCIETY.

More information:

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GRUPO DE INVESTIGACIÓN AGUA Y ENERGÍA PARA UNA AGRICULTURA SOSTENIBLE (AEAS) DEPARTAMENTO DE INGENIERÍA ESCUELA POLITÉCNICA DE ORIHUELA

CIAGRO CENTRO DE INVESTIGACIÓN E INNOVACIÓN AGROALIMENTARIA Y AGROAMBIENTAL | UNIVERSITAS Miguel Hernández

Primary School MIKRO EVMOIRO XANTHI

Circolo Didattico 'Bufalini' di San Giustino e Citerna

DOMOTIC SCHOOL GARDEN

U"St.Kliment Ohridski"

Co-funded by the Erasmus+ Programme of the European Union

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December 17, 2021
Miguel Hernández University of Elche. CAMPUS VIRTUAL https://campus.umh.es
From 9:15 to 14:15

UNIVERSITY STUDENTS WILL BE ABLE TO VALIDATE THE COURSE FOR 0.5 OPTIONAL ECTS CREDITS RECOGNIZED FOR TRANSVERSAL COMPETENCES

THE FIVE HOURS OF THE DAY ARE INCLUDED, TOGETHER WITH FIVE HOURS OF STUDENT WORK. THE CONFERENCES WILL BE TAKEN ENTIRELY IN ENGLISH

Registration is free and you can do it by sending a registration email to

masterautomatizacion.umh@gmail.com

INDICATING NAME AND SURNAME, ID, TITLE AND CONTACT EMAIL.

THE CORRESPONDING MEETING LINK WILL BE SENT TO PLEASE CONFIRM ATTENDANCE PRIOR:

masterautomatizacion.umh@gmail.com

ATTENDEES TO THE CONFERENCES WILL RECEIVE A CERTIFICATE

PROGRAM

WEBINAR: WORKING DAY ABOUT ERASMUS + PROJECT 'DOMOTIC SCHOOL GARDEN'.
AENVIRONMENTAL SUBJECTS IN PRIMARY EDUCATION (SENSORS AND WEATHER STATIONS IN AGRICULTURE, ECOLOGICAL AGRICULTURE, BIOLOGY, BOTANY, SUSTAINABILITY AND AGENDA 2030).

The most important identified needs that justify the project are the need to reduce the school failure of our students, motivate students towards learning STEM, incorporate innovation in institutions, promote teacher training and improve self-training capacity in CTIMA, seek new teaching-learning methodologies, involve students in the teaching-learning process, attend to diversity, collaborate with other European institutions and share experiences, reduce the bias of rurality, bring students closer to environmental problems global, such as climate change, and develop the values in the curriculum in a transversal way.

The result that we will achieve will be a hardware and software system (IO1) adapted to schools, which will be used by the students of the partner centers and exportable to any educational center that wishes to implement it in their classrooms.

This generated material will allow students to build a node with sensors using basic electronic components with easy access and low cost. Based on this, students will be able to develop an agronomic irrigation design to regulate the cultivation of plants in the school garden, through various basic parameters: humidity and temperature, and soil moisture. This project covers the need for schools to reinforce basic technological, robotics and programming skills.

The software together with the didactic activities developed and with examples will be organized in a Pedagogical Guide (IO2) explaining how the project has been developed. The Guide will provide tools that will allow the teacher to carry out projects around the management of the ecological school garden, the low-cost installation of a domotic garden and that facilitate the students to interact with the environment through the garden.

This allows us to build an educational innovation project that we hope will be basic for the training and education of children, especially those with special educational needs, who require innovative projects, beyond the traditional classroom.

CONFERENCE PROGRAM

Friday, DECEMBER 17, 2021. VIRTUAL CAMPUS OF THE MIGUEL HERNÁNDEZ UNIVERSITY OF ELCHE (SPAIN).

9:15 a.m.-9:30 a.m. PRESENTATION OF THE DOMOTIC SCHOOL GARDEN PROJECT
Moderators: Dr. Antonio Ruiz Canales (UMH). Teacher and Lallave Consulting.

10:00 a.m.-11: 00 a.m. PROPOSED ACTIVITIES IN THE DSG PROJECT.

SCIENCE ACTIVITIES (TERESA PRETEL PRETEL).

ACTIVITIES ON ORGANIC FARMING AND SCHOOL GARDENS

(CARMINA MARTÍNEZ ARENES). ACTIVITIES ON SUSTAINABILITY AND CIRCULAR ECONOMY (AMPARO MELIÁN NAVARRO).

ACTIVITIES ON AGROCLIMATIC STATIONS AND SENSORS (ANTONIO RUIZ CANALES).

THE ATTENDING PUBLIC WILL RECEIVE THE PRESENTATIONS OF THE COMMUNICATIONS THAT ARE MADE THROUGHOUT THE DAYS

CONFERENCES MAY BE VALIDATED FOR 0.5 OPTIONAL ECTS CREDITS RECOGNIZED FOR TRANSVERSAL COMPETENCES
THE FIVE HOURS OF THE DAY ARE INCLUDED, TOGETHER WITH FIVE HOURS OF STUDENT WORK. THE CONFERENCES WILL BE TAKEN ENTIRELY IN ENGLISH

10:30-11:00 h. **BREAK**

11: 00-12: 00h. ACTIVITIES DEVELOPED IN PRIMARY EDUCATION IN THE DSG PROJECT.

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Primary School MIKRO EVMOIRO XANTHI

Circolo Didattico'Bufalini 'di San Giustino e Citerna

12:00-12:30 h. AGROMETEOROLOGICAL STATION OF THE DSG PROJECT.

12: 30-13: 15h. SCIENTIFIC APPLICATIONS BASED ON DSG.
"The importance of the water status of the plant: Sensors and indicators "Maria Isabel Valín Sanjiao. Higher Agrarian School. Polytechnic Institute of Viana do Castelo (Portugal).

Experimental hydrological basin in Idanha-a-Nova. António Canatário Duarte, Polytechnic Institute of Castelo Branco (Portugal).

Sensors for agricultural and biological applications. Nawaf Abu-Khalaf. Palestine Technical University-Kadoorie (PTUK). Palestine.

13: 15-14: 00h. ROUND TABLE

14: 00-14: 15 CLOSING.

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