

PARTNERSHIP

The project brings together 9 organizations from 4 countries:

- Warsaw University of Technology (Poland)
- Edumotiva -European Lab for Educational Technology (Greece)
- University of Latvia (Latvia)
- Frederick University (Cyprus)
- ENGINO -Net LTD (Cyprus)

and schools from Poland, Greece and Latvia represented by

- XXXILO High school in Lodz (Poland)
- ZSP2 Zespół Szkół Nr. 2 im. Eugeniusza Kwiatkowskiego w Dębicy (Poland)
- 1st EPAL of Korydallos (Greece)
- Education, Culture and Sports Department of Riga City (Latvia)



ROBOSCIENTISTS


THE ROBOSCIENTISTS PROJECT


MOTIVATING SECONDARY SCHOOL STUDENTS
TOWARDS STEM CAREERS THROUGH ROBOTIC
ARTEFACT MAKING


NOVEMBER 2018 - APRIL 2021

CONTACT:

 Website: www.roboscientists.eu

 Email: admin@roboscientists.eu

 Twitter: [@roboscientists](https://twitter.com/roboscientists)

 Facebook: [@roboscientists](https://www.facebook.com/roboscientists)



Erasmus+

This project has been funded with support from the European Commission under the Erasmus+ Programme (2018-1-PL01-KA201-051129). This video reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

ERASMUS+ 2018-1-PL01-KA201-051129

SUMMARY

RoboScientists project aims to inspire secondary school students (13-17 years old) in making STEM (Science, Technology, Engineering and Maths) fields a career choice by introducing them in robotic artefact construction. The students are encouraged to construct their own robotic artefacts exploring at the same time the underlying concepts of physics and other STEM related subjects. To scaffold their “educational adventures” a set of project scenarios, tools, videos and technical tutorials are designed. The project focuses also on teachers’ professional development in STEM teaching and supports them in updating their teaching skills and designing engaging learning experiences for their students by using low cost technologies and tools and everyday materials for robotic artefact construction. Boosting the DIY (Do IT Yourself) spirit is central to RoboScientists and for this reason the teacher training curriculum will be enriched with relevant case studies from the world of business, inspirational stories and good practices.

Pilots with secondary school students will be carried out in Poland, Greece and Latvia. In addition, STEM Clubs will be established in the participating schools. Robotic artefact creation, STEM Clubs establishment and exposure in inspirational cases studies from the world of business can set a basis whereupon the students can craft a learning path that will help them meaningfully explore STEM and develop a mindset of creativity and innovation.

INNOVATIVE ASPECTS

An innovative aspect of the project is that the students are not encouraged to work with pre-fabricated robots but to construct their own robotic artefacts using a set of low-cost tools and technologies. While they are working on their robotic artefacts, they are exploring the underpinning abstract and/or complex STEM concepts and transform them into tangible learning experiences. In other words, robotic artefact construction is used as a vehicle for experimentation and sense making.

Another innovative aspect of the project is the embracement of the idea of the STEM Clubs. We envision STEM Clubs as places where new ideas are generated, STEM is creatively practiced and people from different disciplines but with interest in STEM can meet-up and join their forces.

MAIN PROJECT OBJECTIVES

The objectives for the project are to:

- Motivate school students (13-17 years old) to explore STEM disciplines by engaging them in creative hands-on practices towards robotic artefact creation
- Enact activities and workshops that promote teacher professional growth and development
- Motivate students in developing interest in STEM studies and careers by engaging them in making practices following the ideas underpinning the Maker Movement pedagogical trend
- Encourage equal opportunities in STEM education for boys and girls
- Create OERs that will support school community members to apply the RoboScientists learning intervention
- Build synergies among schools, business and academia towards STEM Clubs establishment in school settings

PROJECT OUTPUTS:

The RoboScientists project will develop:

- The technical tutorial towards robotic artefact construction
- Six interdisciplinary projects for robotic artefact construction and relevant OERs for students
- The teacher training curriculum that includes the pedagogical framework and OERs for teachers
- Guidelines for STEM Clubs establishment and operation
- An online class that supports teachers' training
- A validation report that presents evaluation results from the 2 pilot rounds
- Workshops and events for the promotion of the project ideas and results

