

Project code: 2019-1-IT02-KA201-063073



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

KA201: Strategic Partnerships for school education



RoboPisces

**“innovative educational ROBOTics
strategies for PrImary School Experiences”**

Newsletter No.1





Summary

Editorial.....	2
RoboPisces' scope and objectives.....	3
RoboPisces' output: the RoboFish toolkit.....	3
RoboPisces' output : the Teachers' training manual	4
RoboPisces' output: the RoboPisces Educational Curriculum	4
Meet the staff	5

Editorial

Dear RoboPisces follower,

We are pleased to present to you our first RoboPisces Newsletter!

On September 2019, the RoboPisces project was successfully launched to enhance the learning outcomes in STEAM subjects of primary school students. Through a constructionist educational approach and the design of a toolkit, called RoboFish, the RoboPisces project aims at creating a teaching and learning curriculum based on Educational Robotics.

RoboPisces is a three-year project coordinated by Università Politecnica delle Marche (Italy) and co-funded by the Erasmus+ Programme of the European Union. It brings together schools and universities from Greece, Latvia, Malta, Croatia, Ireland and Italy.

RoboPisces is on the right path to help improving the quality and efficiency, thus boosting the achievement of the EU benchmark of under-skilled students in STEAM subjects

Stay tuned with the project progress by following our newsletters, social network accounts and web site (www.robopisces.eu), to be informed about future developments.


The RoboPisces Team





RoboPisces' scope and objectives

- Obj.1** Improve students' achievement and engagement in STEAM through Robotics and innovative assessment strategies
- Obj.2** Develop transversal skills in pupils by means of Educational Robotics
- Obj.3** Introducing students to concepts of sustainability through the RoboFish toolkit
- Obj.4** Fostering digital competence provision across the curricula, tailored to specific age groups
- Obj.5** Improve student's interest, participation and motivation in order to reduce and prevent ESL
- Obj.6** Empower primary school teachers' skills and comprehension in Robotics
- Obj.7** Create specific assessment tools along with lesson plans to evaluate the outcomes of lessons



RoboPisces aims to create a teaching and learning curriculum based on ER through a constructionist educational approach and the design of a toolkit, called RoboFish, to engage primary school kids, with the purpose to enhance the learning outcomes in STEAM subjects.

Teachers of primary schools will become familiar with the RoboPisces technological and methodological resources, encouraging a new digital attitude in teachers and making them able to organize technological laboratories practice into regular curricular teaching.

RoboPisces' output: the RoboFish toolkit

RoboFish Toolkit





Its design is based on concepts of both marine and educational robotics. It can be used to introduce a variety of topics:

- IoT implementations;
- neural networks concepts;
- CAD software for 3D printing;
- underwater environment, physics, chemistry and biology.

It will increase **digital skills** and **technology** and **engineering** competences. It will be used in the context of constructionism and experiential learning. It will be released as **OER**.



RoboPisces' output : the Teachers' training manual



It is a comprehensive educational tool with instructions and ideas for creating the ultimate learning experience for primary school students.

It aims at enabling teachers to master the **technical and pedagogical skills** necessary for using the robotic technology in school to be able to develop their own robotics activities using innovative, student-centred and constructivist pedagogical approaches.

The manual will contain an annex explaining how to customize and realize the RoboFish tooling with inexpensive 3D printers, like the ones owned by some schools.

RoboPisces' output: the RoboPisces Educational Curriculum

RoboPisces Educational Curriculum

It will be an **inventory of activities** to be implemented in classrooms by teachers, all of which will compose a brand-new educational path.

Each module will focus on a specific subject and topic identified by project partners as relevant for the project purposes and will include the respective course and training material, learning objectives, and assessment methods.

The Curriculum will be divided in **Basic and Advanced**: each part will include questions, exercises, practical activities about STEAM subjects to solve with standard robotic kits for the Basic course and with RoboFish for the Advanced course. The Advanced course will lead the students to build their own RoboFish.

The combination of robotics and environmental education will represent an invaluable opportunity to present the role of robotics at the service of **environment** and to convey notions of **roboethics** as a new way to design robots fully integrated with the nature and human being.

All the educational resources and activities will be selected and designed to encourage **active, cooperative** and **experiential learning** in all phases of the course





Meet the staff

RoboPisces partners

Università Politecnica
delle Marche, Ancona
PI: prof. David
Scaradozzi
(Coordinator)

University of
Latvia, Riga
PI: prof. Linda
Daniela

University
College of
Dublin, Dublino
PI: prof. Eleni
Mangina

University of Aegean,
Rhodes
PIs: Prof. Konstantinos
Tsolakidis, Ms. Nancy
Pyrini

Istituto Comprensivo
"Solari" di Loreto (AN)
PI: Ms. Paola Traferro

Maria Regina College SPB
Primary, ST. Paul's Bay
PI: Mr. Mark Azzopardi

Osnovna skola Titusa
Brezovackog, Zagreb
PI: Ms. Maja Sokac

Associated Partners

Stanford Center for Ocean Solutions (Stanford University)

Municipio V of Rome

Ufficio Scolastico Regionale of the Marche Region

11th primary School of Rhodes

Rodion Pedeia Primary



Follow us!



info@robopisces.it



<https://www.facebook.com/RoboPisces-project-101099001529438/>



<https://twitter.com/RoboPisces>



<https://www.instagram.com/robopisces/>



<https://www.researchgate.net/project/Innovative-educational-ROBOTics-strategies-for-Primary-School-ExperienceS-RoboPisces>



UNIVERSITY
OF LATVIA

