



## ECO SYSTEMS OF OPEN SCIENCE SCHOOLING

[Present graphics used until the project has developed its own graphics]

*Guidance Collection for Partners*

Erasmus+ 2020-22 (24 months)

Coordinator: Wittenborg University of Applied Sciences

## THE CORE

*Encourage “open schooling” where schools, in cooperation with other stakeholders, become an AGENT OF COMMUNITY well-being; families are encouraged to become real partners in school life and activities; professionals from enterprise, civil and wider society are actively involved in bringing real-life projects into the classroom.*

*Commission 2015, Science Education for Responsible Citizenship*

The ultimate mission of the *Eco-systems of Open Schooling* project is to help secondary schools and science teachers change traditional science teaching into science learning through science missions in collaboration with permanent eco-systems of open science schooling resources – as this approach is expected to engage students in brand new ways and to help them create new and different images of what science is and could be for them.

Or, at least help the science teachers to include periods of such open science learning in the life of schools.

So, how to “help” those schools and science teachers?  
Through qualified, realistic and relevant guidance, of course...

How to produce this guidance?  
Through creating and testing such eco-systems of open science schooling in practice, in real-life and real-time.

And through creating practical experience about how such eco-systems of science resources can help students engage in real-life and real-time science missions in the community.

In the *Eco-systems of Open Schooling* this real-life and real-time testing of the eco-systems of open science schooling will include 50 secondary school students working through a total of 20 science missions, each of which will last between 4 and 6 months!

The project expects to create high quality knowledge from this rich bank of practical experience, and if so, the project will be able to produce really useful final outcomes – for secondary schools and science teachers from across Europe.

### Key **WORK METHODS**

- the schools must be involved as organisations, not as individual teachers
- the eco-systems should be built in interplay with the student missions to create authentic

### KEY **INNOVATIONS**

- the science learning takes place in an **open schooling context** in which student teams carry out science missions important to the community and in **collaboration with local and global science resources**
- the science missions re-install a sense of **detective work**, adventure, pioneering and story-telling in the science learning
- science **knowledge is created on demand**, not when scheduled, in time-outs along the missions
- the missions invite the **students to use their own technology**, not the educational systems', and to unfold their creativity with their own technology
- the missions will allow the young students **to engage in exciting science activities** in collaboration with local and global science resources
- the student teams will engage in science missions based on their **own interests**, also allowing the students to develop critical approaches to the science activities
- the science **missions are relevant** to the community, to the people in the community and to the world

### KEY **OUTCOMES**



#### ECO-SYSTEMS OF OPEN SCIENCE SCHOOLING THE GUIDANCE PACK

To provide science teachers with methodologies, inspiration and good practices that will allow them to take the first steps to establish open science schooling activities in the community, and will at the same time guide the schools towards establishing permanent eco-systems of science collaboration with relevant science and other resources in the community.

The Guidance Pack will consist in elements produced along the project and in direct presentation of science teachers' and students experience.



#### HOW WE LEARNED SCIENCE THROUGH THE ECO-SYSTEMS - THE STUDENT VIDEO

The student teams will create raw material from their science learning missions in collaboration with the new eco-systems, and this raw material will be elaborated and edited during the student mobility towards the end of the project.

The result will be a 20 minutes video movie created by the students and will explain in the most authentic way possible how they learned in interaction with the eco-systems of open science schooling, and how this learning is different from traditional science teaching.



## **POLICY PAPER: WHAT (MORE) DOES IT TAKE TO MAKE OPEN SCIENCE SCHOOLING A REALITY?**

The policy paper will point towards and define what policy and programming initiatives are needed in the new Erasmus+ periods from 2021.

The text will be constituted by short and precise statements, referring to practical experience from ECO-SYSTEMS OF OPEN SCIENCE SCHOOLING and similar projects.



## **RESEARCH PAPER: WHAT (MORE) NEEDS RESEARCH AND EXPERIMENTATION TO MAKE OPEN SCIENCE SCHOOLING A REALITY?**

To identify open science schooling challenges that need to be addressed in the form of European funding priorities. In particular, within the new Erasmus+ programme, the research paper will, summarizing the practical experience from Eco-systems of Open Science Schooling and similar projects, identify important research needs in the field of open science schooling and eco-systems of open science schooling.

Based on lessons learned in the project this research paper will point towards and define what parameters, topics, elements and challenges need further research and experimentation to move towards making open science schooling a reality.

### **PARTNERSHIP**

Wittenborg University  
COORDINATOR

ITA-SUOMEN YLIOPISTO  
Knowledge partner

Liceum Ogólnokształcące  
Practice partner

Scoala Gimnaziala Gheorghe Titeica  
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