PhysicsKIT

4STEM

2020-1-FR01-KA201-080433

Project Presentation

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

This project has been funded with support from the European Commission.
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PhysicsKIT4STEM

Promoting gender-balanced STEM education through DIY Kits for teaching physics in the classroom.

Start date: 01/12/2020
End date: 30/11/2022

Duration: 24 months

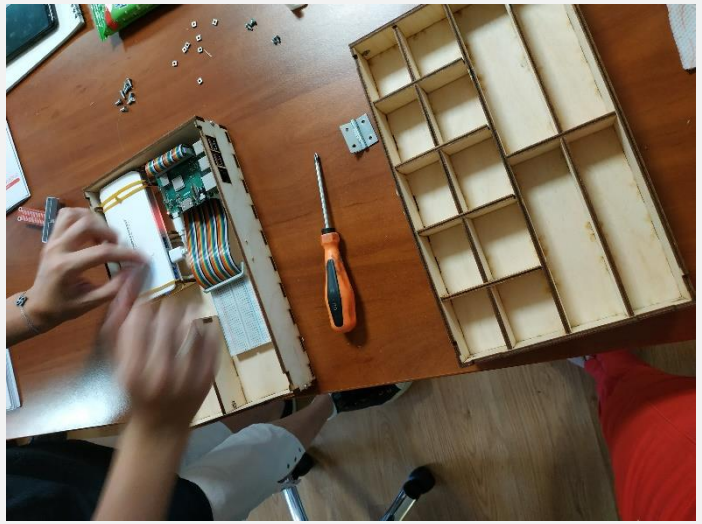
Partnership

- P1 – ECAM-EPMI, Coordinator, Graduate school of engineering in Cergy, France
- P2 – Pistes Solidaires, NGO in Pau, France
- P3 – ASSERTED KNOWLEDGE, SME in Athens, Greece
- P4 – ATERMON, SME in Rotterdam, Netherlands
- P5 – SCHOLE, Primary school in Matosinhos, Portugal
- P6 – EMPHASYS, Education centre in Nicosia, Cyprus

Project Objectives

- Strengthen the teaching skills of STEM educators by offering a hands-on approach to teach physics through DIY electronic kits.

- Advocate gender-balanced STEM classrooms and encourage young girls to follow STEM subjects in future education and careers.



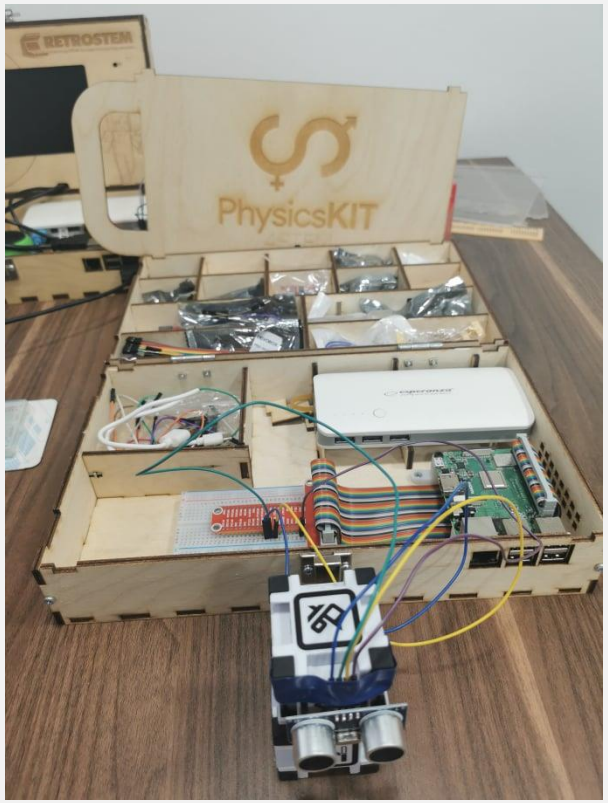
Target Group

- Direct:
  - Teachers of physics in primary and secondary education
  - Students of 10-15 years of age, with special focus on female students
- Indirect:
  - STEM professionals working with children 10-15 years old.
  - Teachers in general, educators, counsellors
  - School education staff, parents

Project Activities

- Design and develop a physics curriculum.
- Create a glossary of terms and definitions.
- Design and develop the PhysicsKIT.
- Develop lesson plans.
- Elaborate an educator's manual.
- Deploy a Learning Motivational Environment.
- Test, validate and finalise the resources and tools.
- Create a virtual space to support the project outcomes.

Expected Project Results (1/4)

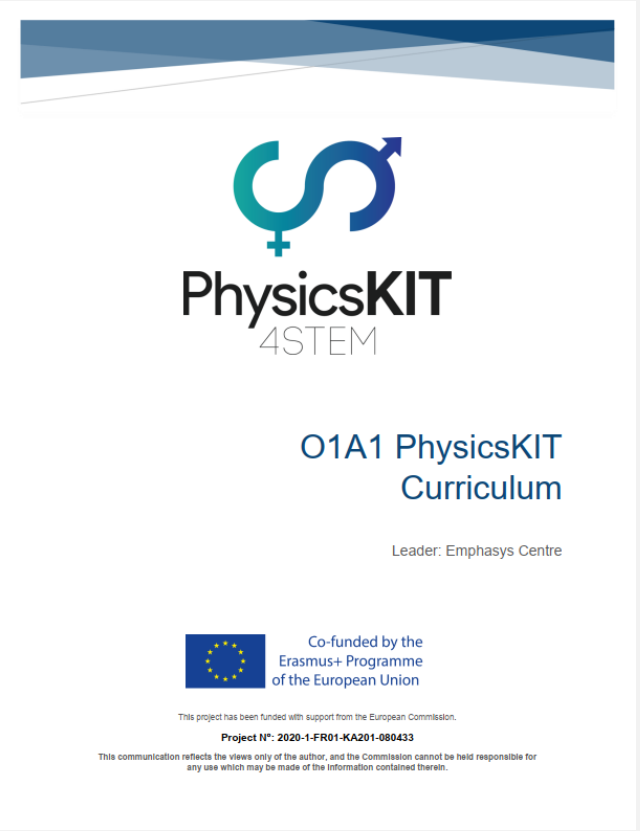


- **The PhysicsKIT** presented in a wooden box comprising DIY kits, sensors, electronics and peripherals to be used with the developed materials.
- **PhysicsKIT Guide** for assembly and configuration of the PhysicsKIT.

Expected Project Results (2/4)

- **PhysicsKIT Curriculum:** including 5 modules (forces & motion, energy, electricity & magnetism, waves, gravity). For each module there is a glossary, introduction to the concept, learning outcomes and a few easy experiments to try with the PhysicsKIT.

- **PhysicsKIT Glossary and online repository:** a compiled glossary including all glossaries from the compiled modules, adding a few necessary extra words. The online repository will be a full online version of the glossary, easily accessible from anywhere.



Expected Project Results (3/4)

- **PhysicsKIT Educators Handbook** with instructions for teachers on how to conduct a class on the topics targeted by the project and 2 lesson plans per module for students to better understand the concepts.

Expected Project Results (4/4)

- **PhysicsKIT Online Platform** including all deliverables developed during the project which will be repurposed to be easily understandable and usable in class. The platform will remain free and accessible even after the end of the project.

- **PhysicsKIT Club** which is a virtual communication/collaboration space for teachers to interact.

Get in touch with us!

https://physicskit4stem.eu/

https://www.facebook.com/physicskit4stem

Thank you!

Any questions?