



Newsletter 1 - June 2021



The project

The Erasmus+ project PhysicsKIT4STEM aims to foster the interest of children aged 11-15 in science. PhysicsKIT4STEM specifically addresses the issue of gender imbalance in STEM classrooms and aims to encourage young girls to get involved in science and engineering subjects. The project provides teachers with a hands-on approach to teach physics through DIY kits, electronics and programming, powered by a Raspberry Pi computer.

Why?

Over the period 2015-2017, if we look at the rate of female graduates from higher education in science, apart from one of Netherland's overseas territories, Saint-Martin, no other European country is in the top 10. There is therefore enormous progress to be made. According to the UN Economic and Social Council, the first contact we have with science is a determining factor. This is exactly what this project is about. Thanks to the development of tools and training kits, the long-term objective is to increase the number of future female scientists.

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The activities

The main objective of the project will be achieved through the following activities:

-Design and development of a curriculum for using the PhysicsKIT to teach students physics concepts such as motion and forces, gravity, vibration and electricity, through the creation of hands-on constructions, simple programming and physical computing;

-Elaborate a Glossary, explaining terms used in physics, programming, electronics and physical computing;

-Design and development of the PhysicsKIT powered by a Raspberry Pi single-board computer, complemented by sensors and electronics to simulate and experiment on physics phenomena along with a guide to build it;

 Lesson plans that will support the curriculum to build kits and use peripherals in an educational hands-on play approach;

-Prepare a Learning Motivation Environment for the delivery of the curriculum to teachers/educators

-Testing, validation and finalisation of the PhysicsKIT Backpack and Educators Handbook and Resources;

-Support the final outcomes through a dedicated virtual space (PhysicKIT Club)

The consortium

PhysicsKit4STEM is an Erasmus Plus project funded by the French National Agency. Coordinated by ECAM-EPMI (France), the other members of the consortium are:

- Pistes-Solidaires (France)
- AKNOW (Greece)
- Atermon (Netherlands)
- Emphasys (Cyprus)
- Scholé (Portugal)

Each member is in charge of a particular task within the project and will oversee the national implementation of the project, the development of its content, with the results and workshops.



Kick-off meeting

On December 10th 2020, the partnership behind PhysicsKit4Stem launched the project during an online kick-off meeting. All partners were present: ECAM- EPMI (France) as well as the rest of the partners for their cooperation Pistes-Solidaires (France), Emphasys (Cyprus), AKNOW (Greece), Atermon (Netherlands) and Scholé



(Portugal) This productive meeting allowed all the participants to discuss their perspectives, the goals of the project and the best way to implement the different steps. The work plan of the two intellectual outputs was established and approved. It started with the development, during spring 2021, of the curriculum.

The first drafts of the five modules of the curriculum and the PhysicsKIT assembly guide are now ready. We entered a review phase before the learning training teaching activity scheduled in September/October in Athens. It will include training on the PhysicsKIT and electronics kits and brainstorming, and open discussions about the PhysicsKIT approach and the elements that should be featured in the PhysicsKIT curriculum that is being developed.

Website and Facebook page

The website of PhysicsKIT4STEM is now officially online! It will be regularly updated with news about the project, the development of its results, with all communication tools ready for downloading. It is available at the following address: https://physicskit4stem.eu/





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