



roBOTics & STEM education for primary schools
2017-1-ES01-KA201-038204

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www.botstem.eu

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THE PROJECT

Recent research have demonstrated that early techno-scientific literacy in children as young as 4 years old could improve their long-term achievement in STEM fields and raise the scientific and technological vocations, especially for girls.

Competencies acquired during childhood, including design thinking, inquiry, coding and robotics, are transferable to other areas. These skills are applicable to all areas during their whole academic and labour life.

BOTSTEM aims to develop a new methodology for integrating STEM programmes into the formal education curricula for childhood and primary schools (4-8 y.o.), using inquiry teaching and educative robotics and code-learning

Its main objectives are:

- To improve the potential students' achievement applied to STEM subjects, particularly in Natural Sciences and Mathematics
- To implement innovative methodologies, using inquiry teaching and computational thinking.
- To develop tools, resources and methods specifically developed for teachers, more motivating and appealing from the point of view of students from 4 to 8 years old.

BOTSTEM will implement inquiry teaching units with a robot-based approach, including code-learning, for enhancing the education in STEM fields.



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Second project meeting in Kristianstad

A year after the kick-of meeting in Burgos, Spain, time had come for the second meeting, this time in Kristianstad, Sweden. Project partners from Spain, Cyprus and Italy joined their Swedish colleagues Björn Cronquist, Marie Fridberg and Andreas Redfors between the 4th and 6th of September for three days of discussions about all our favourite topics: children, programming and STEM. The participants, arriving from various parts of Europe, came through Copenhagen airport (CPH) via the direct train to Kristianstad.

[\[click here to know more about it\]](#)



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New Free Toolkit for primary teachers

*Introduce in your classroom Robotics and Programming with STEM disciplines
in a fun and innovative way!*

In order to help teachers to motivate pupils in a fun, motivating and appealing way, the BotSTEM European Project Partners have created Toolkit to provide digital support for STEM disciplines (Science, Technology, Engineering and Mathematics) using robotics and programming.

The toolkit is a useful and easy tool for teachers as it includes:

- ✓ Theoretical framework with an integrated and inclusive STEM approach
- ✓ A selection of good practices in STEM education and robotics
- ✓ A group of new activities, designed by the BotSTEM project partners
- ✓ A selection of Open Educational Resources, useful for teachers

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The Virtual Learning Environment is now ready

One of the main purposes of the project is the development of an online platform based on Moodle, where teachers of pre-primary and primary schools will be able to form communities of practice. The main course page for teachers is organized in a multi-disciplinary way to emphasize the focus and knowledge of individual instructors. It is populated with additional links to useful resources such as files, tutorials, videos and activities

[\[click here to know more about it\]](#)

The screenshot displays the Moodle interface for the BotSTEM course. On the left, there is an 'ADMINISTRATION' sidebar with various options like 'Course administration', 'Users', and 'Site administration'. The main content area is titled 'BotSTEM' and includes a description of the project's goals and a list of resources with checkboxes for selection. The resources listed are: Announcements, Discussion Forum, Foro de debate en español, Swedish Forum, Forum di discussione in Italiano, Video - Presentation of botSTEM project (Verona 2018), and Toolkits in English, Italian, Spanish, Swedish and Greek.



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Make the education and scientific community aware of botSTEM project

Throughout 2018 botSTEM Project has been introduced to the education community at different congresses internationally as well as in Europe



- ✓ Presentation of a poster at the 3rd Scientix Conference
- ✓ Conduct a workshop during the International Conference 'A talented school for talented students'
- ✓ Taking part in the Conference GIREP-MPTL 'Research and Innovation in Physics education: two sides of the same coin'

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Good Practice: how to use robotics as inclusive tool

The technology can be a mean through which to give equality and dignity to children, contributing to the creation of an inclusive school.

An inclusive environment represent:

- a socialization context for all the students
- an environment of free exchange among peers
- a place where everyone can find the way to express his/her potential and talents

The use of ICT and Robotics can help the teachers to create an inclusive environment if used following the pedagogical concepts of cooperative learning and co-constructivism.

The experience of Luca represent a good example of how the use of a small robot can improve the inclusion of a disabled student.

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Multiplier Event

botSTEM project - Free opportunities in schools to change the Future

Outstanding pedagogists, teachers and professionals from Spain, India, Sweden, Russia, Turkey, FYROM, Greece, Bulgaria, Lithuania and Italy will meet in Verona on **March 30th 2019** to share their innovative experiences, researches and activities for pupils and STEM in a school ready to help them to grow up respecting their potentialities for a future of free opportunities.

Several teams of teachers from many countries of the world will converge at the Verona event to present their innovative technological and pedagogical strategies from European Horizon 2020 to Erasmus + KA2 projects to enrich the day to share and play within 25 parallel practical/ interactive workshops for teachers, parents, kids and students.

The event is free for the registered members. [Click here to register](#)

The complete agenda is [online](#)



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