



1ST NEWSLETTER OF THE STEAMITUP PROJECT

Teaching pupils 21st century skills | Kick-off Meeting

January 2020

STEAMitUP is a 2 year EU-Erasmus+ project that aims to contribute to the advancement of STEAM in school education and raise awareness on the importance of the development of 21st century skills. The University of Groningen, represented by Science Linx and the Institute for Science Education and Communication, is one of the partners of STEAMitUP. The project is a consortium of 6 organisations from 6 different European countries: UK, Cyprus, Ireland, Greece, Spain, and The Netherlands.

In a highly technologized world, 21st century skills like problem-solving, communication and critical and creative thinking are considered to be essential. To prepare the next generation of citizens for an ever-changing social environment it is important to enhance these skills. In this line, STEM education emerged as an interdisciplinary approach to learning where academic concepts are coupled with real-world lessons. STEM is an acronym for the fields of Science, Technology, Engineering and Math.



Buggy Ball with messages from all the partners of the STEAMitUP Project | Photo Science Linx

STEAM education goes a step further by adding an 'A' for arts. The arts introduce creativity, both in the inquiry process as in the final presentation of the results. STEAM education not only increases critical thinking, but provides a unique way to problem-solving, gives all students hands-on experiences and shows students a different way to value the arts. Especially since underachievement in basic math, science and literacy skills is a common problem in many countries, including Netherlands, a competent citizenship in the fields of



Science, Technology, Engineering, Arts, and Mathematics is more needed than ever. The importance of STEAM education for meeting the demands of today's knowledge-based economy is underlined by European Schoolnet and compelling research evidence. However, education systems need to innovate and respond to the changing realities by equipping students and teachers with the necessary knowledge, competences, and skills.

STEAMitUP will contribute to the advancement of STEAM education by promoting the use of digital technologies in schools in creative and collaborative ways. To do so, the project will develop a freely accessible e-learning environment and a toolkit which will offer online blended gamified modules, lesson plans, and material for experiential workshops on STEAM education and on the use of digital technologies.

Overall, STEAMitUP aims to:

- Build the capacity of educators, school leaders, and school staff to organize and implement STEAM activities in schools with the use of digital tools (e.g., robotics) and non-digital tools
- Develop digital skills, creativity, problem solving, self-esteem and collaboration in students through STEAM education, activities and resources
- Encourage and motivate students to be engaged in the fields of STEAM

During the project, a STEAM committee of students, teachers and school leaders of schools in Groningen will be actively engaged. The committee will assist in the development and pilot-testing of the curriculum materials for the Toolkit. The members of the committee will also participate in testing and validating the e-learning platform as well as evaluating the overall project implementation.



STEAMitUP team during the kick-off event in Rijksuniversiteit Groningen, January 14-15 2020 | Photo Science LinX