



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

Practical, Accessible & Free -Innovative STEAM Educator/Teacher Training!



Since 2019 **STEAM Education Ltd.** have been participating in an Erasmus funded **STEAM H project** with seven other European partners from Italy, Germany and Spain.

The Project

The STEAM-H project (an acronym of Science, Technology, Engineering, Arts, Maths, Humanities) has identified the current challenges and barriers to successful implementation of STEAM within primary schools. Through the creation of a wide variety of resources and information including original materials, activities and training modules the project aims to support teachers and educators with little or no experience of STEAM-based learning, in understanding the potential of using a STEAM-based multidisciplinary approach and activities to overall benefit and improve their students learning experience.

Who are the project partners?

Eight Partner Organisations including **FabLab München e.V**. (Germany), **Grundschule an der Lehrer-Wirth-Straße** (Germany), **Co.Meta S.r.I. uni personale** (Italy), **I.C. "Simone De Magistris"** (Italy), **TALENT SRL** (Italy), **ByLinedu** (Spain) and **La Nostra Escola Comarcal** (Spain) and **STEAM Education Ltd.** (Ireland).

LTTA Educator and Teacher Training

The innovative **FabLab München e.V.** was host of the 2021 Erasmus STEAM-H Learning Teaching Training Activity (LTTA) as part of the penultimate phase of the Erasmus-supported STEAM-H project from the 25th - 29th October 2021.

The project representatives and partners, working within the areas of formal and non-formal education, non-profit, educational cooperatives, social enterprises and for-profit organisations brought together their diverse range of experiences with 3D printers, laser cutters, CNC milling machines, vinyl cutters, electronics, robotic maker workshops, coding, virtual and augmented reality, low-tech solutions and options, paper circuits, stop motion as well as didactical workshops and training courses for teachers and educators. The extensive level of creativity, innovation, knowledge and experience of these Erasmus Project partners showcases and demonstrates the depth of the opportunity in this space across Europe for teachers and students to learn, and for innovators to inform and develop the space.



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The Experience

Two of our team members, David Nolan (Business Development Executive) and Suzanne O'Brien (STEAM Scientist & Educator), attended the training. Over the course of the 5 days they got the chance to experience and learn about the latest STEAM approaches, practices and activities that support creativity, imagination and self expression.

Three class groups of local primary school kids visited the FabLab during the week, giving the project partners a chance to shadow the FabLab STEAM practitioners/facilitators carrying out soldering with the kids as well as designing and constructing 3D printed models using Tinkercad. They got a chance to carry out these STEAM activities themselves whereby great fun was had by all. The FabLab practitioners/ facilitators also gave the project partners a tour around the building and demonstrated how the laser cutter worked with each person receiving a personalised engraved metal tag.



The project partners also visited the German primary school **Grundschule an der Lehrer-Wirth-Straße** to observe STEAM activities in action with support from the FabLab STEAM practitioners/facilitators. They enjoyed learning more about low-tech STEAM activities including building a robotic hand model, constructing paper circuits, stop motion videoing, bristlebots, robotics and coding with Bee-Bots, Blue-Bots and Wonder Workshop Dash Robots.



David's Thoughts



It is said that there has been slow progress across Europe towards the advancement of STEM education. One of the obvious barriers to progress is the slow pace of governments, private companies and primary schools to resource and fund the opportunities, which is often seen as taking financial resources away from the more "traditional" school subjects. However, this Erasmus+ STEAM-H Project has made great efforts towards collating open-source lessons, and creating a Community of Practice using E-Twinning Platform, to share these resources. (See link to resources below). The opportunity is there to be taken".

Suzanne's Thoughts

"I thoroughly enjoyed the training and I learned so much. Over the week we got to explore novel STEAM activities, methods and techniques and focused on how we can promote inclusion during STEAM activities within primary schools. It was an experience that opened my eyes to the endless possibilities of STEAM and how the STEAM approach promotes experiential and inquiry-based learning. STEAM activities create a space and opportunity for the personal and social development of young people whereby they can boost their artistic confidence, technical skills, teamwork/collaboration skills, problem solving skills as well as enhance their personal confidence, self belief and perception of their own abilities. The Erasmus training has given me the chance to discover new STEAM activities and ideas as well as valuable knowledge that I could integrate into my own STEAM practice. It was a great learning experience and I would recommend it to other teachers and educators."

How is the STEAM-H Project useful to Teachers and Educators around the World?

The project partners designed a free resource of introductory STEAM-H lessons for teachers to avail of, with English, German, Italian, Spanish and Catalan translations. It can be accessed here through - **Intellectual Output n.4 - HANDBOOK - DO IT YOURSELF - STEAM IN FIVE EASY STEPS!,** along with the other outputs of this project: **STEAM-H Project Results**

The wide variety of resources, information and tools provided will help teachers and educators to build their confidence in organising, implementing and potentially adapting STEAM activities for the groups they are working with. It is accessible to all levels of teacher competency in STEAM-H. Teachers can try out different STEAM approaches and methodologies that best suit their available space and facilities while promoting engagement and inclusion and being able to link different curriculum subjects together.





