

# NEWSLETTER

## LTT1

### ***FULL STEAM AHEAD!***

#### **MARCHENA (Spain) - FIRST LTT1 (Learning, teaching, training event)**

We need to do our best to help our students, and most of all our female students, achieve and maintain the high standards needed to meet the challenge of approaching STEM learning with confidence and to realise its immense positive influence on their future education and employment. They need our highly motivated, well qualified teaching to encourage their forward-thinking, innovation and problem solving.

To achieve all this, six schools from six different European countries (Estonia, Finland, Greece, Poland, Slovakia and Spain) have agreed to work together on a project called *Full Steam Ahead!*, whose main aim is to combat the gender inequality gap existing in the field of STEM and promoting STEAM (STEM and Arts for a full and integrated approach) education among students.

The project's objectives are the following:

- increasing motivation of students, particularly females, to study STEAM subjects;
- fighting stereotypes regarding female role in STEAM world;
- raising awareness of STEAM studies as career opportunities;
- improving knowledge and capacity in STEAM area, implementing more active, hands-on methods while teaching STEAM;
- making STEAM teaching and learning fun and exciting;
- strengthening the profile of teachers by exposing them to innovative teaching and motivating methods.
- We also want to make our students aware of their European cultural heritage through familiarizing them with famous scientists (particularly women), whose discoveries and historical achievements constitute the basis of modern science and development.

On December, 2019, from Monday 16th to Wednesday 18th, 3 teachers per partner organization took part in lectures and workshops on how to become well-versed in teaching STEAM subjects, on how to motivate and inspire their students. They were provided with modern, creative and practical approach to teaching processes and teaching methods (hands-on workshops, interactive labs etc.). Seminars, workshops and activities were organized for STEAM subjects teachers: -“Builders of Dreams” – on how to foster and support development of young people’s interests and competences in STEM areas; - “The Galaxy of Women” – presentation of past and current famous and significant European female scientists and technological industry professionals; - “The road is not always easy” - workshop on how to motivate students and build their self-confidence; - STEAM-oriented field trips and cultural activities; -Teambuilding activities, as this was the first project meeting.

[Full steam ahead! 2019-2021](#)

## FIRST MEETING DAY (Monday, 16th December, 2019)

15 guest teachers from Estonia, Finland, Greece, Poland and Slovakia, as well as participating teachers from Spain, started the day by visiting Marchena Town Hall.



The Mayoress welcomed the group of teachers



and Ms. Agata Dutkowska, the project coordinator, together with the school headmaster, Mr. Pedro Ortiz, and the Spanish coordinator, Ms. Raquel Álvarez, were interviewed on the local t.v.:

<http://rtvmarchena.es/el-isidro-arcenegui-continua-su-participacion-dentro-del-proyecto-europeo-steam/>





After that, the group took part in a guided tour around the city center.







In the afternoon, the teachers were shown the school around by the Spanish students who belong to the STEAM Club. The teachers were divided in small groups of three and two students per group played the role of tourist guides.







Among other things, the students showed and explained them the project board, where they had the opportunity to play three different interactive games related to Chemistry, Technology and Biology, prepared by both the teachers and students.







Then the group of teachers attended the lecture/workshop *'The Galaxy of Women'*, presentation of past and current famous and significant European female scientists and technological industry professionals. This workshop was conducted by the students from

third course of secondary education: Julián Baco, José María Jiménez, Elena Guisado, Silvia Ponce, Lucía Núñez and Elena Melero.



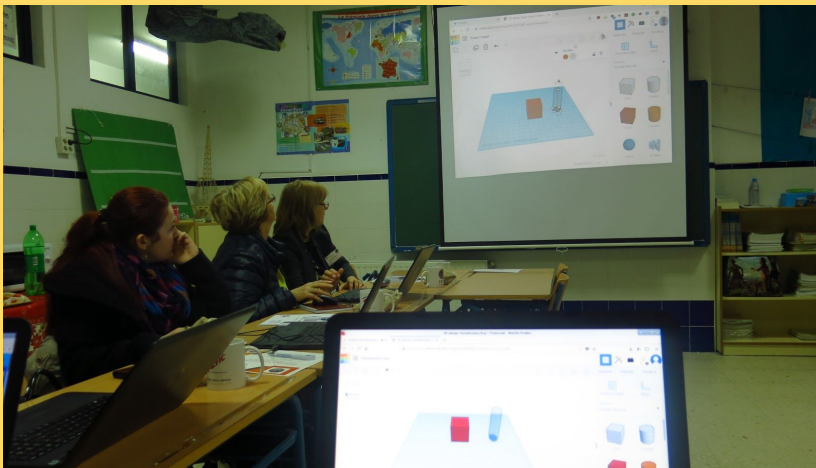




In the evening teachers took part in the workshop *'Builders of Dreams'* on how to foster and support development of young people's interests and competences in STEM areas. It was led by the manager of the company OPTIMUS Educación Stephanie Schneeberger, specialist in robotic and STEM education. Basically, Stephanie gave the teachers notions about Scratch. Teachers could use Scratch to teach the principles and programming of mobile robots (including cars and walkers) to Middle School-aged kids. Teachers were also taught about Augmented reality which can breathe new life into the classroom, bringing extra creativity, interactivity and engagement to any subject.







In the evening, the coordinators had their 1st Project Management Meeting where they had to:

- review the general schedule of the project (in case of necessity changes to the schedule might be done) and task distribution.
- the project coordinator (acting as an evaluation monitor for the project) will present and assess the evaluation criteria concerning project management, implementation of activities, dissemination of results and its impact.
- clarify the main objectives of the project and the process of their achievement;
- set effective and efficient ways of the project implementation;
- review and confirm distribution of the tasks among the partners;
- discuss all the activities planned for the project and the means of the dissemination;
- discuss the setting up of the STEAM Clubs in partner schools, their activities, obligations and outcomes;
- assess possible risks and the way of preventing them;
- confirm the communication channels.



The day ended with a welcome dinner at *'La Alcazaba'*.





# SECOND MEETING DAY

## (Tuesday, 17th December, 2019)

On the second day, the Erasmus team went on a cultural daytrip to Córdoba. The day started with the visit to *La Mezquita*

and then the group continued with a tour guide around the city center and *The Alcázar*. The group of teachers could learn that in 10th-century Córdoba, mathematics- and particularly geometry- was applied to architectural design in new ways, constituting a “mathematical turn” of Islamic architecture. In the mosque of Córdoba and in the palaces of Madinat al-Zahra, geometry was employed in the design of ground plans, elevations, decorative patterns, and even to measure the human view.







# THIRD MEETING DAY

## (Wednesday, 18th December, 2019)

In the morning, meeting participants took part in the workshop “The road is not always easy” in The House of Science in Seville.



It was a workshop on how to motivate students and build their self-confidence. It was presented by Mr. Juan Ignacio González Hidalgo, manager of the company *Laberinto*, specialized in STEM workshops and teachers' formation courses in Seville, and his colleague Marina Camacho. The workshop was conducted both in English and Spanish.



Teachers took part in exercises that showed them how to work the STEM subjects with their pupils in class, teaching them science, technology, engineering and maths in a different and more entertaining way. Each teacher was given a tablet to work on different activities. One of them was to use the abacus for mathematic operations. Then, they learnt how to control the movements of a robot from the tablet. After that, starting from a story, they had to solve a riddle. Finally, they made some interesting chemical experiments.





Afterwards, the group of teachers had a tour guided by Clotilde Palomino, a tourist guide, who showed them the most interesting places in the city.





In the afternoon, the teachers participated in a *Escape Room*, where they had to use teamwork and critical thinking to solve a series of challenging education-based puzzles in order to open a locked box. The teachers can use a *Escape Room* with their students to solve STEM related puzzles to unlock a special box. .







Later in the evening the team had a farewell dinner.

