

Scientix in our school- discovering STEM

Cornelia Melcu

Romania (corneliamelcu@yahoo.com)

My name is Cornelia Melcu and I am a primary school teacher in Brasov. Additionally, I am a teacher trainer of Preparatory Class Curriculum, Google Application in Education Course and European Projects Course and a mentor to new teachers and students in university. I am an eTwinning, Scientix and ESERO ambassador too. During the last three school years my school was involved in several STEM projects, part of Scientix community. The main goal of those projects was to develop basic STEM skills of our students based on project work integrated into the curriculum.

Open the Gates to the Universe (<http://gatetostheuniverse.blogspot.ro>; <https://twinspace.etwinning.net/12520/home>) is an eTwinning project for primary school students started on September 2015 and finished on September 2016. Some of our partners were from the Mediterranean area. The students discovered different aspects of space science and astronomy working on international groups. They explored some aspects of Science included in their curriculum using resources from ESERO, ROEDUSEIS and Space Awareness (e.g. Calculate with Rosetta, Writing the travel diary, Build Rosetta, How to become an astronaut, etc.)

The project was a great opportunity to apply integrated learning methods for developing competencies which are a part of the primary school curriculum in Romania. In Language and Communication classes the students talked about their partners living places and their traditions and habits. They learnt some basic words in their partners language related to the weather. They created stories- both in Romanian and English; they described life in space and astronomical phenomena. They talked to the other partners during the several online meetings we organized and wrote short stories in English. In Mathematics and Science they found out about the Milky Way, the Solar System, the weather, famous astronauts and astronomers. They calculated, solved problems, made experiments and explained specific natural phenomena related to Space. During the ICT lessons, they used different devices for creating and playing online games and quizzes, took photos and edited them, searched for and found specific information related to the topic. In Art they made cards, posters, drawings and paintings. They learnt songs in Music and in PE made outdoor experiments (like calculating the distance between planets in our Solar System using a scale). During the Personal Development lessons the students found out solutions for problems (e.g. How would you survive in Space?) and they presented their project work to their schoolmates, teachers and parents.

The project 'started where the children were', it was built on the knowledge and ideas children brought with them to lessons and helped them to develop their understanding of scientific concepts related to the Universe. It helped them to understand the diversity of weather conditions and as part of a world community and their responsibility for the environment. The students are able to identify main planets and stars on the sky and they have of basic notions related to Earth and Sun;

In conclusion, the project provides opportunities for learning STEM topics in pre-primary and primary education. Implementing the project gave the children and all the adults involved (staff, parents) a lot of fun and satisfaction.