

## Chapter 13

# Minecraft Our City, an Erasmus Project in Virtual World: Building Competences Using a Virtual World

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### ABSTRACT

*Virtual worlds (VWs) offer alternative learning environments for geoscience education and give students a feeling of “being there.” In fact, VWs are also immersive environments that enable situated learning and constructivist learning in accordance with the Vygotsky theory, because the learner is inside an “imaginary” world context. In this environment, many activities and experiences can take place as scaffolding, cooperative learning, peer-to-peer and peer evaluation, coaching, scientific inquiry. Therefore, VWs can be a new technology to motivate students and provide the educational opportunities to learn in a socially interactive learning community. In the literature already, some studies report experiences carried out to investigate the effectiveness of virtual worlds in education. In the world, there are virtual worlds used for education such as Opensim and Samsara. Minecraft (<https://www.minecraft.net/en-us/>) is a virtual world used by new generations specially.*

### INTRODUCTION

Nettuno 1 Comprehensive Public School - <https://icnettuno1.edu.it> - has been taking part in the Erasmus plus Project with Greece, the school leader, France and Spain from 2018 to 2020. The project is called ‘OUR CITY’ that involves primary and secondary school grades and is part of a search action path led by a group of teachers skilled in Virtual Worlds based learning: Open sim, Minecraft etc.

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Our City Project started from the cooperation of four European countries: France, Greece, Italy and Spain.

Teachers focus their attention on European culture and cooperation using the rebuilding of their cities in different ways.

This activity is based on the largest tangible pieces of the nations' cultural heritage, France, Greece, Italy and Spain, for instance.

In this project students recreated their cities and monuments of their cities in Italy, Greece, Spain and France using different tools. The Italian team chose MINECRAFT. A groups of teachers used this tool to recreate monuments in Rome, Nettuno and Italian cities. This project promotes collaborative inclusion among the participants of the project through Minecraft. Constructivism is the educational philosophy that involves students in a world in which everything is created with their imagination and creativity. This environment improves the students' skills such as problem solving, creativity, language and socialization.

In this environment immersive education and learning is possible through lessons that improve the 21<sup>st</sup> century skills, creative problem solving and digital citizenship. It is possible to use Minecraf Education Edition as a support of education in a world of tutorial and best practices.

Minecraft can be used on personal computer, notebook, tablet and smartphone. This is a potential aspect of this educational world.

In this environment it is possible to carry out exploration, storytelling, digital learning and game based learning. All these aspects are involved in this project.

The Project has been following different phases. Project 'OUR CITY' was planned in three years and three stages. During the first year every country contributed to the design activities. The Italian team made up of Alessandra Conti, Maria Simona Lambiase, Raffaella Di Palma, Loredana Rocchetti, Raffaella Verbeni and other teachers created activities in their classrooms on Minecraft and chose the monuments of the city of Rome and the seatown of Nettuno in order to create a 3-D construction outline. Every classroom chose a monument and recreated it in the virtual world.

In the first part of the first year students and teachers were in a training phase. Teachers learnt to use Minecraft attending a course held by an expert in Minecraft Marco Vigelini.

In the same period students learnt how to use different tools on Minecraft and worked on Minecraft design and construction.

Every classroom was divided into small groups of 3-4 students under the supervision of a coordinator. They worked in different environments and created monuments to share with students from France, Greece and Spain. At the end of first year (2018-19) students created different videos, shared them on YouTube and explained their work and environments. In the second year, in May 2019, students travelled to Greece to show their work to Spanish, French and Greek students. This collaborative work and the sharing of skills were fundamental for this project. Twelve students and six teachers worked in the Hill School in Athens and the other 49 members with the Spanish students from Barcelona, French students from Paris and Greek students from Athens. In October 2019 the Greek students arrived in Italy in the seatown of Nettuno near Rome and stayed a week to gain and have knowledge of the real Italian monuments that they visited in the virtual world of Minecraft. They managed to do sightseeing of the Colosseum and the monuments of Nettuno such as Borgo, Torre Astura, Forte Sangallo etc. During this meeting Italian students became the tutors of the Greek students and peer tutoring was used for the activities during the Italian week's exchange.

From 2020 to 2021 there is the last part of the project with a final journey to Spain in the city of Barcelona in the school of Saint Gervasi. In this project the Ecole Alsacienne of Paris took part, too.

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