3DP for learning STEM subjects

Mathematics and science subjects in general are often perceived by students as something abstract, unrelated to their experiences.

This disconnection causes a general lack of interest in these disciplines in the immediate future and the loss of important resources in the European labour market. Precisely for this reason it is essential to develop new teaching methods capable of motivating students to learn mathematics and science. 3D printing technology is central to many educational experiments.

Through the creation of three-dimensional models of objects designed by students or derived from mathematical and scientific concepts, it is possible to learn, through field experience, the link between the abstract concept and its concretization.

Introducing 3D printing technology into the school experience means improving the approach to STEM subjects, a very complicated approach especially in kinaesthetic students, who find it very difficult to follow conventional frontal lessons and need practical stimulation and to actively live their learning process. In this perspective this technology can be the key to effectively support the improvement of school performance of a group of difficult students.

The teacher needs to consciously dose traditional lessons with practical ones, always focusing on the "logic of doing" and the acquisition of a method.

During the practical activity, through attempts, monitoring events, errors and recording information from a process, the student becomes aware and able to finalize his/her work.

It is possible to find more information about 3D printing, including applications, trends and its benefits for Education in the “3DP TEACHERS’ GUIDEBOOK”. Make sure you are following the “3DP TEACHER - implementation of 3D Printing in future education” project’s Facebook page to be the first to know when the guidebook is published on project’s website.