Scenario for mathematical classes within the Erasmus + project

Date: October 23, 2020

Topic: Boxes, boxes and boxes - how does the plotter work?

Participants: Students in grades 4.

Objectives of the lesson:

• familiarizing students with the operation of the Omni-Box production line,

• mathematical activation of students,

• developing the spatial imagination of students,

• familiarizing students with various types of spatial figures.

Description of the classes:

The aim of these classes was to familiarize students with the operation of the Omni-Box production line, which, using a machine-plotter, deals with computer programming and the production of various boxes. Unfortunately, due to the restrictions caused by the pandemic, students could not participate in the live demonstration of this machine. They watched, however, two videos showing the process of creating a box, from taking the box's measurements, through creating its design in a special computer program, to cutting out the box template by the plotter machine.

Then the students were given several boxes cut by the plotter to put together. They started assembling them with great enthusiasm, getting to know new shapes for themselves as well as developing their spatial imagination, trying, without prompts from the guides, to correctly assemble the mesh of the solid into a box.

The classes ended with the children assembling models of cubes, using the method of folding a page called orgies. This task turned out to be a real test of accuracy and patience, which the participants had to show.

After the class, the students marched home happy with a few boxes that they folded, as well as with their own assembled cubes.