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HUMAN RESOURCE DEVELOPMENT CENTRE

Erasmus+ Programme – Strategic Partnership Project - STEM Education - 2018-1-IT02-KA229-048507

СУ "Летец Христо Топракчиев"

STEM Education

Short-term exchange – Bulgaria

Date – 16 October 2019

Workshop – Maths Inspiration: Finding the area of stereometric shapes

Teacher – Maya Aleksieva

Type of the activity – teacher presentation + team work

Materials – ppt presentation, handouts, a pen

Lesson Plan

Tasks

- To deepen the knowledge and skills of students to find faces on the surfaces of the rotated bodies included in the school programme
- To form skills for analysis, interpretation and evaluation of the results obtained in the model

Objectives

1. To deepen logical knowledge and skills by increasing the role of thinking in the learning process at the expense of reducing theoretical information.
2. To show the connection of mathematics with other subjects or situations in everyday life by directing the `students' activity towards the creative application of knowledge and experience.
3. To enrich the methods of thinking and developing observation, imagination and concentration of thinking.
4. To form a positive attitude towards mathematics, creating interest and motivation for students to study it by presenting mathematical problems in real situations.

Procedure

1. Historical notes on the concept of stereometry.
2. Recall the necessary formulas for the surface of a sphere and a frustum of a cone.
3. Task1: To get acquainted with the iconic Alexander Nevski Cathedral in Sofia, which the students saw during the tour of the city and to present the Maths problem: To find how many kilos of gold are needed to gild the large cube of the cathedral.
4. Solving the problem on the board and showing the correct answer.
5. Task 2: Presentation of the ancient theater in the city of Plovdiv, which the students will visit the next day on the tour of the city and formulation of the task: What is the area occupied by the seats for spectators in the amphitheater?
6. Solving the problem on the board and showing the correct answer.