Visual Mathematics in Practice

Name of the teacher:	Valentina Kreculj Terjeskova	
Name and address of the school:	Branko Radicevic Grammar and Economics School Cara Lazara Kovin Serbia	
Theme of the lesson:	Polyhedra	
Place in curriculum: (type of school, grade)	High school, third grade	
Age of the students/pupils:	seventeen	
Title of the lesson:	Pyramid and its straight sections, truncated pyramid	

Description of the lesson

Time	Exercises, matters, parts of the lesson	Methods and forms of student activities	Developable competencies
5min. 10min. 25min.	I explained idea of **programmed instruction** that came from Summer school (lesson GeoGebra -Djurdjica Takaci) Then we learned how to do some **basic construction** using software GeoGebra o rectangles. o equilateral triangle o squares. o regular hexagons Proper **construction of hexagonal truncated pyramid** we will start with a regular hexagon ABCDEF. This can be done using the software package GeoGebra using tools Regular Polygon. After that, we calculate the center of the basics, point G, the center of the circle described around the hexagon. Through this point we construct the height of the pyramid and determine her peak, point H. Then, by using Polygon, side of ABH. At the edge we construct arbitrary point I.Through a point, and by using Parallel Line, we construct a line parallel to segment AB. In this section make a longer BH, and by using the	*Individual work, work in pairs,project work, exhibition, competition.*	**Mathematical thinking:** systematization, combinativity, analysis, synthesis, analogical thinking, logical conclusion, probability conclusion,… **Problem posing and solving** problem sensibility, problem representation, textual understanding, reading, originality, flexibility of thinking, pliability, transferring, divergent and

5min	Intersect Two Objects, we get the point J. Now, again using the Regular Polygon tool, mark the points I and J, and enter the number of vertices of the hexagon. We will get hexagon IJKLMN For homework: construction of square truncated pyramid, using software package Geogebra and instructions on link http://elibrary.matf.bg.ac.rs/bitstream/handle/123456789/2572/Milos_Miletic-master_rad.pdf?sequence=1		convergent thinking, task keeping, creativity,… planning, purposivity, whole-partial perception, looking for connections measuring, deductive and inductive thinking, speed of exercise-solving, algorythmical thinking

Summary

Students were very attentive, and focused on instructions and they were happy if they first finished. It was like some kind of competition . I think it was very usefull for students . For me it was pretty hard, because of the dynamics of class work.

Supplements

Used materials:	**Improving the teaching of mathematics in the 3rd middle schools class using the software package GeoGebra** Master work Miloš Miletic University of Belgrade Faculty of Science IT classroom, projector
Photos: