Visual Mathematics in Practice

SERBIA

Name of the teacher:	*Katarina Ivanovic*
Name and address of the school:	*OS „Stevan Dukic", Danteova 52, Belgrade, Serbia*
Theme of the lesson:	*Prism*
Place in curriculum: (type of school, grade)	*Primary School, 8th grade*
Age of the students/pupils:	*15 years old*
Title of the lesson:	*Area of Prism*

Description of the lesson			
Time	Exercises, matters, parts of the lesson	Methods and forms of student activities	Developable competencies
-45 min to make groups and introduce activities; *-One and a half weeks for pupuls to make final products of projects,* *-5 hours for exhibiton with pupuls introducing their work to other pupuls,* *-45 min for evaluation of projects*	*Tasks: each of 9 groups in one class have a different tasks, all of them including prism net and prism area. Tasks are practical or they include investigation.* *Just in short:* *Group 1: Measure the dimensions of different juice box products to find out which manufacturer uses the least amount of packing material.* *Group 2: Same task with boxes of tea bags.* *Group 3: Cubes- investigate all cube nets; make cube from straws and choose some other material to do that, like fruit; show how to investigate its area and volume.* *Group 4: Make a model of city from boxes of sweets and other products we use in everyday life, and count area of some of them.* *Group 5: Shows prisms in real*	*Project work, work in groups or in pairs, exhibition.*	*Critical thinking, mathematical thinking, problem solving, modelling, reasoning and proofs, representation, mathematical communication, making use of aids and tools.*

	world around us (presentation), and count area of some famous prism for pupils. *Group 6: Op art cubes.* *Group 7: Soma cube and origami cubes. Soma cube in computer games.* *Group 8: Be a designer of different kind of roofs , according to different kind of triangular prism, and also cuboid.* *Group 9: Dispersive prism(optics) and optical illusions with prisms, in Belgrade, and how to make them in art.* *Inspiration: Robert Fathauer, Ilona Téglási, Slavik Jablan*		

Summary

Those pupils in my school had no tasks of this kind before (project based learning) so they have a lot of questions and ideas. That was a reason to let them do the projects a bit more more then one week. Exercise organized like this is good because it makes them investigate, look for reasons and also ways to solve a problem, they work alone and together with others. The main idea: raise pupils interest in mathematics by inspiring them to develop connections between mathematics and other sphere of life, like art, visuality, games and practical problem solving, also make them use creativity in final product representation. I expect from all pupils to master the basic knowledge of prism, and become interested in learning and discovering more.

Supplements

Used materials:	*Paper, staws, cardboard, computer presentation programs, pictures, boxes, ...*
Photos:	*Not yet, project is in progress*