

# The Geometer's Sketchpad as a Learning and Teaching Tool in Croatia

Jelena Gusic<sup>1</sup>, Zeljka Milin Sipus<sup>2</sup> and Petar Mladinic<sup>3</sup>

<sup>1</sup>XV gimnazija, Zagreb, Croatia, <sup>2</sup>University of Zagreb, Croatia, <sup>3</sup>V gimnazija, Zagreb, Croatia

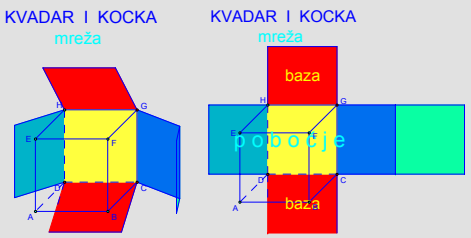


Gimnazija

**ABSTRACT**

- Poster illustrates the activities and methods applied to introduce DGS in classroom environment
- Workshops with elementary and secondary school teachers started in late nineties
- DGS was implemented in regular classes from the year 2000

## TEACHERS' TRAININGS ORGANIZED IN THREE LEVELS:



### INTRODUCTORY WORKSHOPS WITH TEACHERS

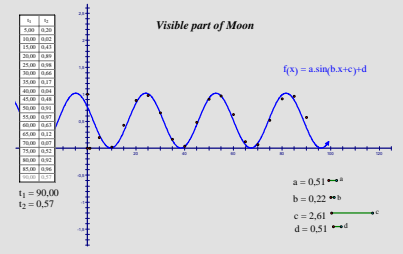
- Teachers are getting acquainted with software, mainly through geometric topics like basic construction of triangles and their characteristic points. Besides, they learn how to make presentation and do some animations.

### WORKSHOPS WITH EXPERIENCED TEACHERS

- Teachers work with students/classroom materials. They learn how to use parameters, how to do modeling....

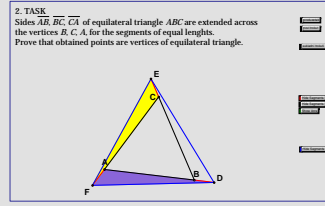
### PREPARATION OF CLASSROOM ACTIVITIES

- Proficient teachers produce new classroom activities – teachers' presentations as well as students' working materials.



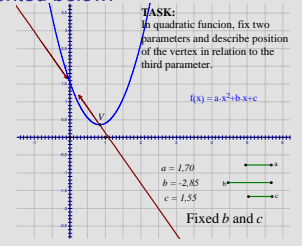
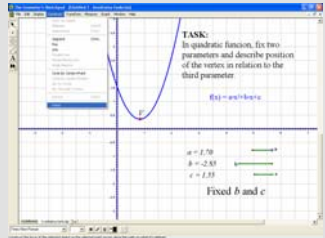
## CLASSROOM ACTIVITIES WITH STUDENTS

Students in their classrooms explored regular school topics by means of technology.



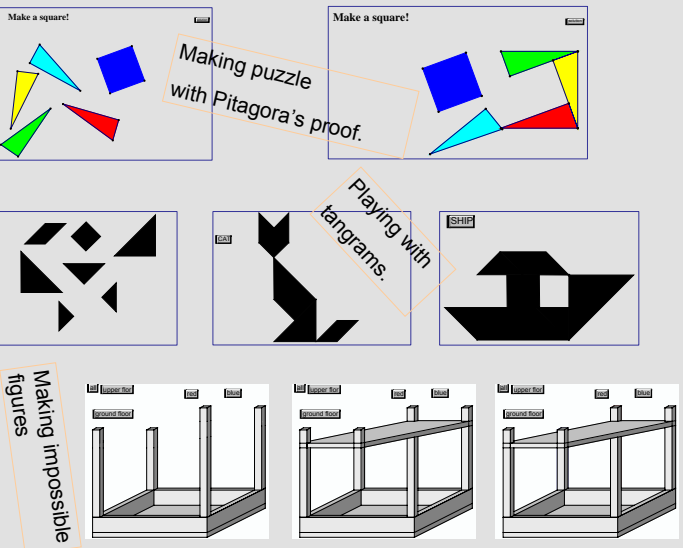
- 1<sup>st</sup> grade students explore congruences of triangles. After introducing the concept, they practice methods of proving.

- 2<sup>nd</sup> grade students explore the influence of parameters  $a, b, c$  to the shape the quadratic function. Some works are presented below:

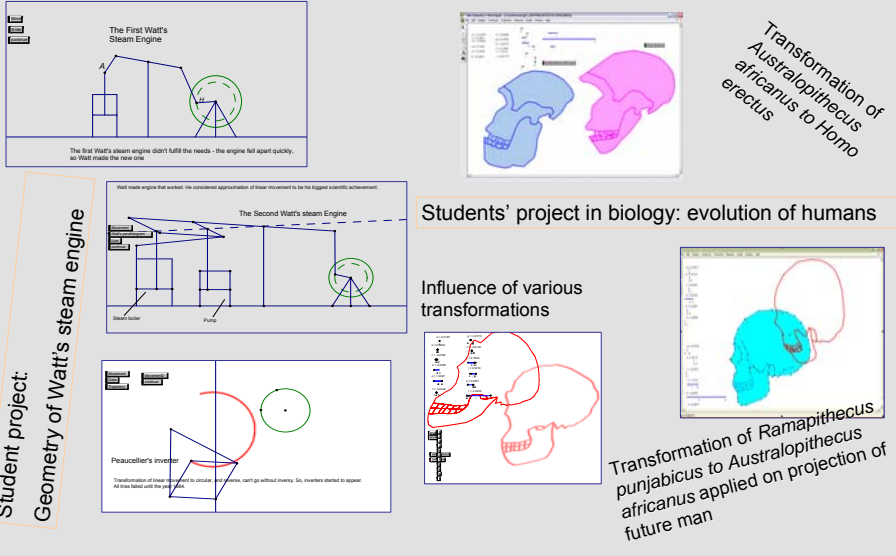


## PROJECTS MADE BY STUDENTS

Students had some fun after classes!



Some students were engaged in extracurricular (elective) activities



## TEACHERS' COMMENTS ABOUT THE USAGE OF GSP WITH STUDENTS

- Students became more confident in their mathematical abilities.
- Students were not passive when working with GSP.
- Students could choose the pace that fits their abilities the best.
- Students had some fun while doing mathematics.
- Students with special needs showed tremendous change in behavior and interest in mathematics.