

**Common Teaching Unit plan
(structure and contents)**

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Name of school	IPSAA M.e T. Bellini – Trecenta (RO)
Theme of the lesson	Analytic Geometry : the Parabola using Geogebra and Kahoot!
Pupils' age range	16 – 17 (3th class in our school)
Timeline	6 hours in March 2019
Objectives	<ol style="list-style-type: none"> 1. Learn the main instructions <i>App Geogebra</i>. 2. Given a parabola's equation, find: the vertex, the axis of symmetry, the focus, the directrix and the coordinates of the intercepts with cartesian axes. 3. Build three "Sliders" to show a general graph of the parabola in the cartesian Diagram 4. <i>Operational research</i> -improve the ability to analyse and solve problems in a real situation with models of parabolas. 5. Use <i>App Kahoot!</i> to review the topic.
Methods	<p style="text-align: center;">Part I (Geogebra Apps)</p> <ol style="list-style-type: none"> 1. The teacher explains the main Geogebra's statement for drawing a parabola into the cartesian Diagram and shows steps to build a "Slider" . 2. The students use their new knowledge about Geogebra and analytic geometry in order to sketch parabola's graphs. Next, the teacher gives students some exercises to draw parabolas that have to have specific characteristics. <p style="text-align: center;">Part II (Geogebra Apps + Kahoot! Apps)</p> <p>The teacher presents Kahoot!, an App to make learning games, (if the students don't already know it). The teacher prepares Kahoot quizzes to review the topic and the students, that are divided into teams, try to guess the right answers.</p> <p>They will give the teacher their opinions about working with Apps: Geogebra and Kahoot!. (feedback)</p>

Materials Used Apps	Computers, smartphones and tablets Geogebra, Kahoot!
Assessment	Written test. Group work.
Remarks	The teacher will coordinate his students in every step of their activity. He will encourage students to work correctly in groups.