

Learning Unit Обучение	
Subject Предмет	Media
Title Название	Room planning / 3d modeling for beginners
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School Школа	Tallinn 53. Secondary School
Description of the unit Описание	At the integrated lessons of Media and Mathematics, our students practiced Creating 3d-visualization of living space. Having previously measured the room, Observing the scale, proportions and characteristics of the materials, the students created 3d models of their rooms in Voxel graphics.
Contents Содержание	Voxel - formed from the words: volumetric (English volumetric) and pixel (English pixel) - an element of a three-dimensional image containing the value of a raster element in three-dimensional space. Voxels are analogs of two-dimensional pixels for three-dimensional space. Voxel models are often used to visualize and analyze medical and scientific information.
Learning Outcomes / Результаты обучения Skills \навыки	The students mastered the skills of 3D modeling in MagicaVoxel. Learned the basics of 3D rendering
Target students/class Целевой возраст учащихся	High school (16 – 17 age)
Prerequisites \Предварительные требования	Students should have a basic knowledge of computer graphic
Time expected / Ожидаемое время	5 hours
Interdisciplinary links / Связь с другими предметами	Integrated with Mathematics
Methodology / Методология	Team-work (2-3 persons): ability to create a project and make decisions in association with each other during implementation.
Human Resources (internal and/or external) Человеческие ресурсы (внутренний и/или внешний)	Media and Computer Graphics teacher Mathematics teacher



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Resources / ресурсы	Computer with Internet connection and graphic software installed - MagicaVoxel
Lesson Plan/План урока	<ol style="list-style-type: none"> 1. Analyzing the plan and measurements of room 2. Creating the scene in MagicaVoxel according the scale and proportions of room. 3. Creating the walls, floor and ceiling 4. Creating the furniture and room accessories 5. Creating the lighting 6. Adding materials and adjusting characteristics 7. Adding materials and lighting onto scene 8. Making 3d-rendering and saving as PSD format 9. 3d-rendering.
21st Century Skills	<p>Development of spatial thinking. Engineering skills in building objects and working in 3D graphics software Basic 3D modeling and visualization skills. Team working.</p> <p>Creativity Media literacy Collaboration Innovation skills Technology skills and digital literacy</p>
Assessment	Summative assessment
Remarks	



