

Learning Unit	
<b>Subject</b> <i>Предмет</i>	Media
<b>Title</b> <i>Название</i>	Chemistry / 3d modelling and Augmented Reality for beginners
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<b>School</b> <i>Школа</i>	Tallinn 53. Secondary School
<b>Description of the unit</b> <i>Описание</i>	In the integrated Media and Chemistry lessons, our students practiced in 3d-modelling and learning how to create presentations in augmented reality (AR)
<b>Contents</b> <i>Содержание</i>	
<b>Learning Outcomes /</b> <i>Результаты</i> <b>обучения</b> <i>Skills</i> <i>навыки</i>	The project helped students understand 3D-modelling and using the 3D models together with Augmented Reality. This helps to create interactive presentations which can be used in different subjects.
<b>Target students/class</b> <i>Целевой возраст</i> <i>учащихся</i>	High school (16 – 17 age)
<b>Prerequisites</b> <i>Предварительные требования</i>	Students should be have a beginners knowledge of computer graphic software Adobe Photoshop, Adobe Dimension, Adobe Aero
<b>Time expected</b> <i>Ожидаемое время</i>	5 hours
<b>Interdisciplinary links</b> <i>Связь с другими предметами</i>	Integrated with Chemistry
<b>Methodology</b> <i>Методология</i>	Team-work (2-3 persons): ability to create a joint project and make joint decisions during implementation.
<b>Human Resources</b> <i>(internal and/or external)</i> <b>Человеческие ресурсы</b> <i>(внутренний и/или внешний)</i>	Media and Computer Graphics teacher Chemistry teacher
<b>Resources / ресурсы</b>	Computer with internet connection and graphic software installed Adobe Photoshop, Adobe Dimension, Adobe Aero



Learning Unit	
<b>Lesson Plan/План урока</b>	<ol style="list-style-type: none"> <li>1. Creating the 3d-model of molecule in Adobe Dimension</li> <li>2. Creating the text and stickers for atoms in Adobe Photoshop in PNG format</li> <li>3. Adding stickers or add.graphic onto Adobe Dimension scene</li> <li>4. Adding materials on a 3d-model, adjusting the parameters of materials.</li> <li>5. Exporting ready 3d-model onto Adobe Aero in GLB format.</li> <li>6. Creating an animation using Behavior Tool, actions and triggers in Adobe Aero</li> <li>7. Adding photos, texts and etc. onto scene in Adobe Aero</li> <li>8. Exporting the ready project onto *.real format for mobile device</li> <li>9. Making the AR-scene using Adobe Aero on mobile device</li> <li>10. Making and recording the movie using mobile device.</li> <li>11. Create the video presentation using video editor.</li> </ol>
<b>21st Century Skills</b>	<p>Development of spatial thinking.            Engineering skills in building objects and working with 3D graphics and Augmented Reality            Basic 3D modeling and visualization skills.            Team working.            Design thinking skills            Creativity            Media literacy            Collaboration            Innovation skills            Technology skills and digital literacy</p>
<b>Assessment</b>	Summative assessment
<b>Remarks</b>	

