

## We are the makers – IoT Learning Scenario – 3d Art

<b>1. Title of the Scenario</b>	<b><i>3d Art: how to improve the learning of art whit 3d printing activities</i></b>
<b>2. Target group</b>	This scenario can be fit with different ages: - 6-10 yo / 11-13 yo /14-16 yo
<b>3. Duration</b>	This scenario can be divided in 3 different 1/1,5 hour lesson.
<b>4. Learning needs</b>	Artistic Heritage of a city or country, draw, 3d representation, use of the mobile, 3d printing, design,
<b>5. Expected learning outcomes</b>	Awariness of the cultural heritage Learn ethical and social behaviours Learn art Learn to print in 3d
<b>6. Methodologies</b>	<p>Lesson 1: We can use flipped classroom, divide the classroom in 6 different groups (or more) (each group have to be composed of 3 students) Each group can choose a different sculpture from a museum (it be suggested to visit a museum and select sum sculptures)</p> <p>Lesson 2: In the museum we have to do the photogrammetry to achive more pictures of each sculpture.</p> <p>Lesson 3 Edit the 3d Sculpture with Sculptris (see the LS created from Danish partner)</p> <p>Lesson4: Print it and create a "blind" presentation of each sculpture, where each students can discover the artefacts with the hands.</p>
<b>7. Place / Environment</b>	Classroom, lab, museum
<b>8. Tools / Materials / Resources</b>	Projector, Audio system, Smartphone or Tablet with photogrammetry software ,

<p><b>9. Step by step description of the activity / content</b></p>	<p>Lesson 1</p> <ol style="list-style-type: none"> <li>1. Use the presentation (LINK) to involve students and share some information about art.</li> <li>2. The teacher have to create a presentation about the museum that the students have to visit.</li> <li>3. The teacher have to selected different artefacts from the museum and ask student to prepare a research on one of the sculpture.</li> <li>4. The research can be created on a page on the sculpture, a 2d draw.</li> <li>5. Each group have to present the artefacts selected to the others.</li> </ol> <p>Lesson 2</p> <ol style="list-style-type: none"> <li>1. Install the app on photogrammetry.</li> <li>2. Agreement with the museum to use photogrammetry in the museum.</li> <li>3. Each group have to prepare a 3d file of the artefacts.</li> </ol> <p>Lesson 3</p> <ol style="list-style-type: none"> <li>1. Download the file on the computer</li> <li>2. Edit with sculputris</li> <li>3. Send to the printer</li> <li>4. Start to manage the event where students have to present their 3d printed artefacts and the public cant use the eyes to understand the artefacts.</li> </ol> <p>Lesson 4</p> <ol style="list-style-type: none"> <li>1. With the methodologies of flipped classroom we have to organize a presentation of artefacts.</li> <li>2. Every presentation have to be understanding for impair visual people.</li> </ol>
<p><b>10. Feedback</b></p>	<p>Lesson 1: the presentation of the artefacts  Lesson 2: the quality of file, 3d model  Lesson 3: The quality of the real model printed  Lesson 4: The quality of organization and explanation</p>
<p><b>11. Assessment &amp; Evaluation</b></p>	<p>Lesson 1: Evaluate presentation  Lesson 2: evaluation of the team group during the visit  Lesson 3: evaluation of the product  Lesson 4: Evaluation of the booth (presentation of their colleagues)</p>