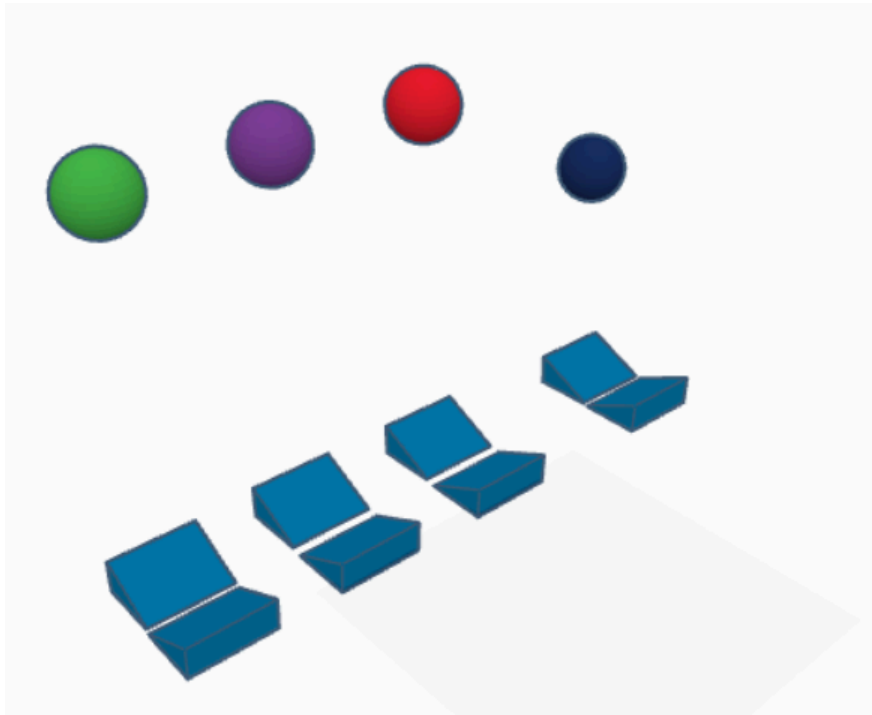


Learning Unit Обучение	
Subject Предмет	Informatics
Title Название	Heart Rhythm
Author Автор	J. Tkachova, K, Toropova
School Школа	Tallinna 53. Keskkool
Description of the unit Описание	<p>In this lesson, students will collaborate to learn about the working of the heart (rhythm study)</p> <p>At the end of the lesson, students will demonstrate what they have learnt about the working of the heart, using modeling software. At the end of the lesson the students will present what they have learnt and modulated with the help of Tinkercad</p>
Contents Содержание	<p>Informatics Link to Class in tinkercad.com https://www.tinkercad.com/joinclass/RKLLNLBRU The "testing" section contains templates for testing such concepts as: the dynamics and statics of an object, the effect of the material of the object on its actions (bounce, slope). In the "billet" section you can test your knowledge and skills in a specific situation, namely building a domino situation.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid #ccc; padding: 5px; width: 30%; background-color: #8B4513; color: white; text-align: center;"> <p>Заготовка</p> <p style="font-size: small; color: #ccc;">Добавлено Apr 26, 2023</p> </div> <div style="border: 1px solid #ccc; padding: 5px; width: 30%; background-color: #38A838; color: white; text-align: center;"> <p>Тестирование</p> <p style="font-size: small; color: #ccc;">Добавлено Apr 26, 2023</p> </div> </div> <p>https://youtu.be/EqUfgffJx_8 - Heart rhythm dance.</p>



Learning Unit Обучение	
<p>Learning Outcomes / Результаты обучения Skills навыки</p>	<p>Expected outcome https://www.tinkercad.com/things/1u7nhYLocAo (From left to right: normal heart rhythm, arrhythmia (tachycardia and bradycardia), death). Simulation of the situation, presentation at the blackboard, teamwork, demonstration and defence of the idea.</p> 
<p>Target students/class Целевой возраст учащихся</p>	9 - 10 class
<p>Prerequisites\Предварительные требования</p>	Programm Tinkercad.com
<p>Time expected/Ожидаемое время</p>	3 hours
<p>Interdisciplinary links/Связь с другими предметами</p>	Biology, maths, rhythm, music, art, psychology
<p>Methodology/Методология</p>	Group Work, Creative problem-solving and decision-making, Expression, Modelling



Learning Unit Обучение	
Human Resources (internal and/or external) Человеческие ресурсы (внутренний и/или внешний)	IT Teachers and biology teacher
Resources / ресурсы	Computer with access to the Internet and Tinkercad
Lesson Plan/План урока	<p>1st lesson (1,5 h): In the first lesson, pupils study the topic of heart rhythm in groups with the biology teacher, watching a training video. Together with the computer science teachers, they study the Tinkercad.com environment and carry out test work with templates (individual work).</p> <p>2nd lesson (1,5 h): Combine their knowledge in their project, synthesising their knowledge of biology and their skills in the tinkercad.com environment (paired work). Present their idea in front of their classmates.</p>



Learning Unit Обучение

- Critical thinking
- Communication skills
- Creativity
- Problem solving
- Perseverance
- Collaboration
- Information literacy
- Technology skills and digital literacy
- Social skills
- Literacy skills
- Thinking skills

21st Century Skills

Critical thinking: they will analyze- the data collected during the experiments made by themself

Creativity: they will

Collaboration: they will collaborate between groups at the biology lesson and in each group to realize the final tinkercad project presentation of the group work.

Problem solving:

Perseverance

Communication, Thinking skills, Social skills: They will communicate in the conceptualization phase of each phase of project.

Information literacy: the students are asked to inform from multiple sources of information (video, book, web).

Technology skills and digital literacy: They will create some tinkercad project.



Learning Unit Обучение	
Assessment	<p>A summative assessment is given for each group's presentation of the finished project.</p> <p>A formative assessment is carried out periodically by the teacher to assess the intermediate stages of the groups' work.</p>
Remarks	<p>This project was created for computer science and biology lessons, but it can also be adapted for other subjects, such as physics, if you wish.</p> <p>Photos from the practical work:</p> 