

Programming for the 21st century classrooms

Future Classroom Scenario

Title of the scenario:

Computational Thinking through Lego Mindstorms

Names of team members:

Dimitrios, Georgios, Martina, Jesús.

Tools and Resources

What resources, particularly technologies, will be required?

1. Lego mindstorms
2. Software Mindstorms education
3. Youtube as a tool for flipped classroom
4. Computers (laptops, tablets, smartphones etc.)
5. Lego forums, manuals etc.

Targeted grade levels

What is the minimum and maximum age of students that can be involved with this scenario ?

From 12 to 14.

Learning Objectives, Skills and competencies

What are the main objectives?

What skills will the learner develop and demonstrate within the scenario? (e.g. 21st Century Skills).

1. Objectives: Obtain programming skills and enhance their computational thinking
2. Skills: Co-operation & teamwork, social abilities, 21st century skills, self-regulated learning, open problem solving.
3. Computational thinking, coding, optimization, gamification

Learner's Role

What sort of activities will the learner be involved in?

1. Icon-based Code programming
2. Assembling
3. Design
4. Problem solving
- 5.

Future Classroom Scenario Narrative

Describe in max 10 sentences the main ideas of the scenario.

In a escape room there is one robot. Students program the robot to find the exit. They make use of touch and distance sensors and of course the motors. They can't touch the robots. In parallel, they have a competition for the optimised solution (elegant code, creativity, innovation, time of the escape).

Outcome

Add the link to the video, drawing, photo collage or any other creative outcome you have created to explain your idea behind this learning scenario.