

Future Classroom Scenario - Gothenburg

Title: Mathematical patterns with programming

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Relevant trend/s and school vision

Write the trend or trends the Scenario is intended to respond to, and whether they need to adapt to the future or embrace the future indicated by the trend. 1 or 2 trends is normally enough. What is your school vision towards these trends?

The scenario aims at responding to the trend of project-based learning, the teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging and complex question, problem, or challenge.

What level of maturity is the scenario intended to achieve? This should be one level above the current level of maturity on the Future Classroom Maturity Model.

FROM: Current Future Classroom Maturity level	TO: Desired Future Classroom Maturity level
2 Enrich - The learner becomes the user of digital technology, which improves learning and teaching practices.	3 Enhance - The learner is able to learn more independently and be creative, supported by technology providing new ways to learn through collaboration.

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).

The main objective of this scenario is to offer an alternative way of understanding mathematical patterns and exercising computational thinking. The students will develop the skills needed to see patterns through simple programming (block programming) using servos and pushbuttons and they will be introduced to basic electronics.



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Learner's Role

What sort of activities will the learner be involved in? How will they progress in achieving their objectives?

Learners will be mainly working in groups to:

- Program simple electronic devices;
- Exercise mathematical patterns;
- Create

Teacher's Role

What will the teacher need to do to guide and support the learning, and ensure the learners meets their objectives?

The teacher will set out the project first and then closely monitor the students during group-work, giving feedback and guidance when necessary. Her/his help could focus on an organizational level (phases, timing, pace,).

Tools and Resources

What resources, particularly technologies, will be required? How will they be used? Remember to refer back to the Future Classroom Maturity Model and the level of maturity you want to achieve.

Microbits, servos, simple electronics (batteries, leds, pushbuttons, wires); Scratch, projektor and apple-tv; NOMP (application for iPad).

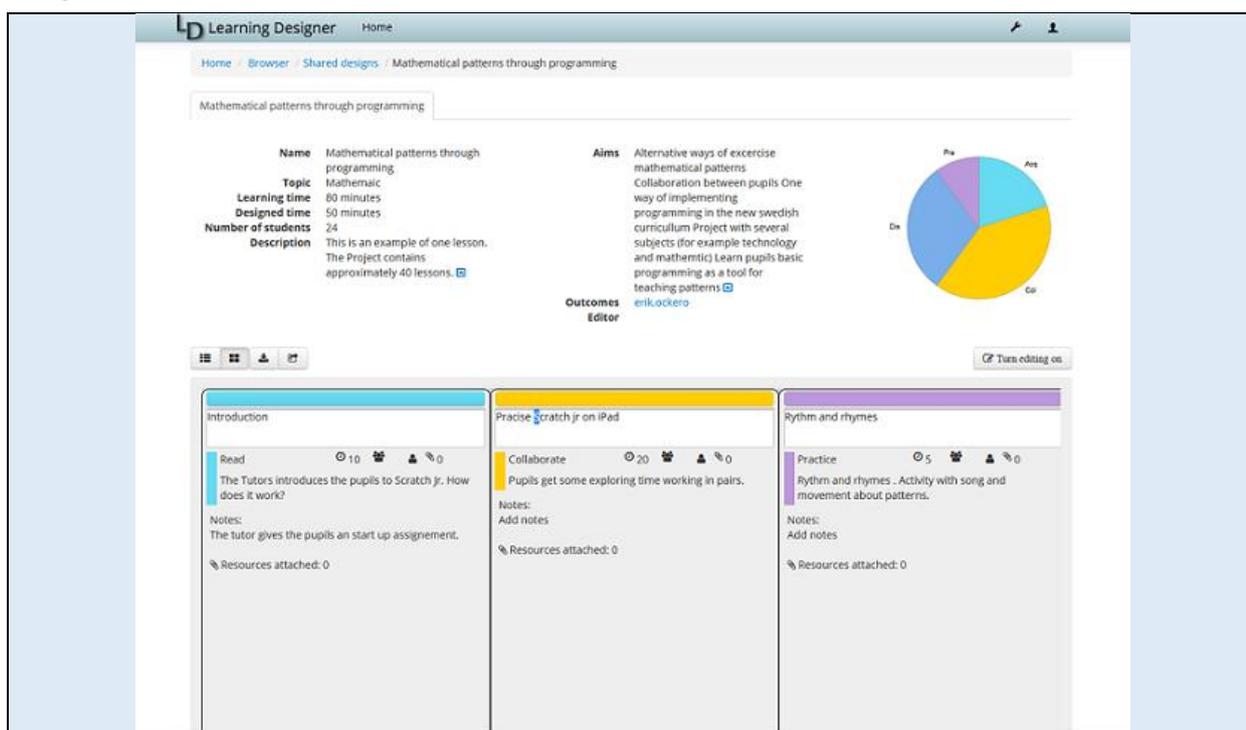
Future Classroom Scenario Narrative

The idea of this scenario is to offer a way of implementing programming in the new Swedish curriculum. To this end, this scenario suggests a project based learning approach combining Mathematics with Technology, as the students will have to collaborate in order to program and create while understanding and exercising mathematical patterns.

<https://v.gd/QoYYWa>



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View the video produced based on the scenario

[FCL Regio: Mathematical patterns with programming - Öckerö, Sweden](#)



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