Learning Design for: Let's code!

**CONTEXT**
Topic: Coding, programming
Total learning time: 198
Number of students: 24
Description: Learning the basics of coding (programming)

**AIMS**
To learn the basic elements of coding, to code a game with Scratch

**OUTCOMES**
Application: A game created by Scratch

**TEACHING-LEARNING ACTIVITIES**

*Introduction to coding*
*Practice // 30 minutes // 1 students // Tutor is not available*

Play the game Lightbot (in this game you give instructions to the robot to light the blue squares)

*Discuss // 10 minutes // 24 students // Tutor is available*
What kind of commands did you give to the robot to complete the tasks?

*Collaborate // 15 minutes // 4 students // Tutor is not available*
In groups, prepare a task. Write down the commands to complete the task. You are allowed to use max. 15 commands. Later, choose one of the students to be a robot, read the commands to him/her one by one, he/she'll have to follow the instructions.

*Discuss // 10 minutes // students // Tutor is available*
Did the "human" robot complete the task as planned? If not, why?
The importance of coding, coding in everyday life, what is coding?
Read Watch Listen // 5 minutes // 1 students // Tutor is not available

Watch the following video. It gives general information about where code is used in everyday life. http://www.youtube.com/watch?v=9LVbhM2VHiY

Discuss // 10 minutes // 24 students // Tutor is available
Give some examples of systems that are managed by coding.

Introduction to Scratch (A visual programming tool)
Read Watch Listen // 3 minutes // 1 students // Tutor is not available

Watch the video of introduction to Scratch http://vimeo.com/29457909

Discuss // 10 minutes // 24 students // Tutor is available
What kind of projects can you create with Scratch? What kind of commands are there in Scratch?

Practice // 15 minutes // 24 students // Tutor is not available
Play some games created by Scratch. After playing each game have a look at the code. http://scratch.mit.edu/starter_projects/#Games

Create a game
Collaborate // 30 minutes // 4 students // Tutor is available
Plan a game in your group, write down the introduction about your game.

Produce // 40 minutes // 4 students // Tutor is available
Create the game in Scratch.
Investigate // 10 minutes // 4 students // Tutor is not available

Have a look at the code blocks created. Which commands has your group used most?

Investigate // 20 minutes // 4 students // Tutor is not available

Play each other's games and evaluate them, what is good, what could be better.

View this lesson plan online.

This lesson plan was created as part of the online course ‘How to Teach Computing: An Introduction to Concepts, Tools and Resources for Secondary Teachers’, funding for which was provided by the Grand Coalition for Digital Jobs.