

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 minute s// 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.



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