Learning Design for: Introducing Coding

Context

Topic: Coding Stories

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Total learning time: 45

Number of students: 20

Description: This is the introductory lesson of the project: Coding Stories

Aims

- introducing coding concept

- what algorithm means

- introducing coding blocks

- recognizing the importance of coding/programming in everyday life

- practising giving instructions

- learning to use ScratchJr

Outcomes

Knowledge (Knowledge): coding vocabulary, directions, ordinal numbers

Algorithm - A list of steps to finish a task.

Debugging - Finding and fixing problems in an algorithm or program.

Program - An algorithm that has been coded into something that can be run by a machine.

Comprehension: meaning of coding/ programming and algorithm

Application:

- working on unplugged activities

- making a scene with Scratch Jr application

Teaching-Learning activities

Lead-in

Discuss   5 minutes   students   Tutor is available

What is coding or programming? Why is it important? Do you know any objects that can be programmed to run codes? (streetlights, cars, watches, smart TVs, smartphones, washing machine, etc)

Investigate   5 minutes   students   Tutor is available

Think like a computer

I need a volunteer to come and sit in front of the class. Please, take off your shoes and socks. What is the first step to put on the shoes? (I ask the class) Children elicit their opinion then we slowly build up the algorithm together: 1. locate the socks 1. pick up one of the socks 2. turn it out 3. put on one foot 4. put on your shoe 5. repeat it all to the other foot Well done! You just gave me a list of steps to finish a task. In computer science, that's called an Algorithm!

Main part

Read Watch Listen 5 minutes   students   Tutor is available

Introducing the eTwinning project

Coding Stories In this part of the lesson, pupils find out what Coding Stories project is, the aim of the project, participating countries, what activities we will do, etc. I show them the project Twinspace, too. I also talk about why it is good to take part in eTwinning projects.

Read Watch Listen 8 minutes   students   Tutor is available

Introducing the coding blocks

There are many types of programming languages, we will do programming without computers with the help of Scratch Jr coding blocks. Have you heard about Scratch or ScratchJr? Scratch is a programming language you will learn in 5th grade when you will have ICT classes. ScratchJr is the lead-in application, the little brother of Scratch Cat. You can work on it at home if you have a tablet, unfortunately, there isn't any at school. Let's see what blocks do we need for coding. These blocks are instructions that you can use to make algorithms with. What is an

algorithm? (A list of steps to finish a task). Let's learn the basic blocks with this Quizlet study set.

Produce   *9 minutes   students   Tutor is available*

Activities on worksheets

Make Otto find his bowl on the maps.

Collaborate   *10 minutes students   Tutor is available*

ScratchJr Scene

We create a scene with Scratch Jr collaboratively. We coded without computers, now let's code with a computer. Do you know ScratchJr? It's an early coding application that is easy and fun making stories and games with. Let's create a scene with Otto and Flossy. Do they like each other? What do they usually do? Paint the cat to become Otto from the Happy Street book and add the background. Resize the cat and add Otto's movement blocks Paint the dog to look like Flossy. Resize it. Add Flossy's movements. Record Flossy's barking and add what Otto says.

Closure

Discuss   *3 minutes   students   Tutor is available*

We watch our project made with ScratchJr and talk about how they can work at home with this application.