

1ST AND 2ND CLASSES: UNPLUGGED ACTIVITY CREATING ALGORITHMS

BACKGROUND

The children have already taken part in a number of whole class activities examining what an algorithm is and how it can be used to tell a computer or digital device what to do.

They have also been asked to identify digital devices in the world they live in and discuss how they might be programmed to work.

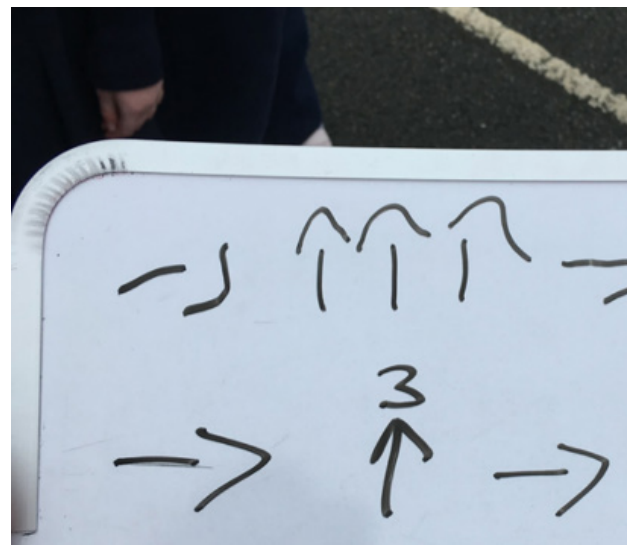
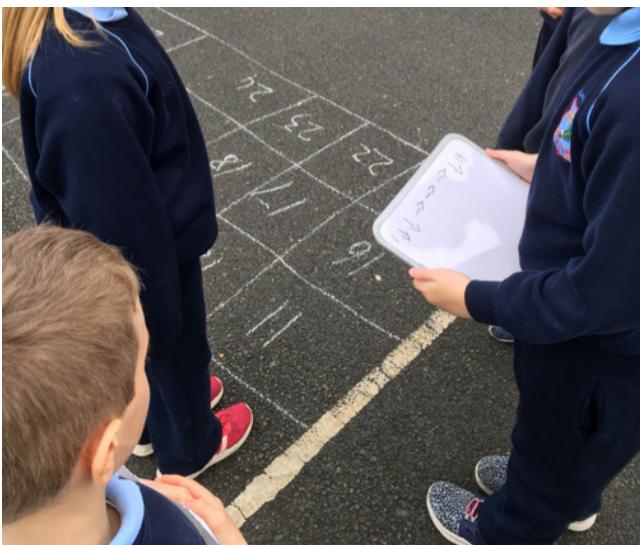
TASK

The children are asked to complete a set of unplugged activities introducing the main concepts of what an algorithm is in preparation for the children to programme digital devices. An unplugged activity simply requires pencil, paper and problem solving skills.

The children are asked to give oral directions to each other to get from point A to B around the classroom. For example; move 10 steps forward, turn right, move 3 steps forward and so on.

The children are then instructed to create chalk grids drawn on the yard and work in groups of 3-4, with each child then having a specific job; a sprite (the controlled object), a programmer and a reader.

The sprite has to follow the directions given by the reader, written by the programmer. The programmer is limited to using three directions, forward, right & left (\leftarrow \uparrow \rightarrow) to complete task.



CHILDREN'S WORK

The children worked together to debug their code and also made recommendations on how they could either improve or refine their algorithms.

The children also started putting in numbers above their forward, left, right symbols in the case of repetition to make the code more efficient.

They were then asked to design a set of instructions or code on paper to use in a Scratch Junior project.

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