Blockly Introduction

What is Blockly?

Blockly is a block-based visual programming tool. It is written in JavaScript, which is a popular programming language. We will be using Blockly to complete a series of maze challenges – this will introduce you to some programming fundamentals such as loops and conditionals!

The First Maze

This introduction will focus on the first maze, so that you can get an idea of how these challenges work.

Step 1 – Open your web browser and search for https://blockly.games/, or "blockly games".

Step 2 – Click on the "maze" option.

Step 3 – You should see 3 different blocks; move forward, turn left and turn right. The aim is to move the little gold figure towards the red checkpoint (the maze animation should be on the left of the screen).

Step 4 – Choose which blocks you will need for this maze. Drag your selections over to the right side of the screen and fit them together like a jigsaw. This works in a similar way to Scratch. The blocks should be in the order you want them to happen, e.g. move forward, then turn left.

Step 5 – when you are done, click "Run Program" – the figure should move. If you get it wrong, try again!

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Why Are we Doing This?

Blockly is a great introduction into the fundamentals of programming, and uses problem solving skills. The challenges are fun and can be quite challenging – this encourages computational thinking, and you'll start using loops and conditionals.

What You'll Need

Access to the internet and this handout. There is also a video tutorial for this activity if you are finding the text hard to follow.

Programming Concepts

This first maze is quite simple and doesn't require any complicated programming.
The main programming concept covered here is **algorithms**
Algorithms are a set of instructions used to complete a task. The process of putting the blocks together in the right order is creating an algorithm.

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Solution

The solution for this maze is quite simple. The figure needs to move forward in a straight line for two spaces, so all you need is two move forward blocks joined together.