**Elworth CE Primary School**

**KS1 Programming Skills Progression**

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|  | **Y1 (A)** | **Y1 (B)** | **Y2 (C)** | **Y2 (D)** |
| **KS1 Programming** | To explain what a given command will do* I can predict the outcome of a command on a device
* I can match a command to an outcome
* I can run a command on a device
 | To choose a command for a given purpose* I can find which commands move a sprite
* I can use commands to move a sprite
* I can compare different programming tools
 | To describe a series of instructions as a sequence* I can follow instructions given by someone else
* I can choose a series of words that can be enacted as a sequence
* I can give clear and unambiguous instructions
 | To explain that a sequence of commands has a start* I can identify the start of a sequence
* I can identify that a program needs to be started
* I can show how to run my program
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| To act out a given word* I can follow an instruction
* I can recall words that can be acted out
* I can give directions
 | To show that a series of commands can be joined together* I can use more than one block by joining them together
* I can use a start block in a program
* I can run my program
 | To explain what happens when we change the order of instructions* I can create different algorithms for a range of sequences (using the same commands)
* I can use an algorithm to program a sequence on a floor robot
* I can show the difference in outcomes between two sequences that consist of the same commands
 | To explain that a sequence of commands has an outcome* I can predict the outcome of a sequence of commands
* I can match two sequences with the same outcome
* I can change the outcome of a sequence of commands
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| To combine forwards and backwards commands to make a sequence* I can compare forwards and backwards movements
* I can start a sequence from the same place
* I can predict the outcome of a sequence involving forwards and backwards commands
 | To identify the effect of changing a value* I can find blocks which have numbers
* I can change the value
* I can say what happens when I change a value
 | To use logical reasoning to predict the outcome of a program (series of commands)* I can follow a sequence
* I can predict the outcome of a sequence
* I can compare my prediction to the program outcome
 | To create a program using a given design* I can tell the actions of a sprite in an algorithm
* I can decide which blocks to use to meet the design
* I can build the sequences of blocks I need
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| To combine four direction commands to make sequences* I can compare left and right turns
* I can experiment with turn and move commands to move a robot
* I can predict the outcome of a sequence involving up to four commands
 | To explain that each sprite has its own instructions* I can show that a project can include more than one sprite
* I can delete a sprite
* I can add blocks to each of my sprites
 | To explain that programming projects can have code and artwork* I can explain the choices I made for my mat design
* I can identify different routes around my mat
* I can test my mat to make sure that it is usable
 | To change a given design* I can choose backgrounds for the design
* I can choose characters for the design
* I can create a program based on the new design
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| To plan a simple program * I can explain what my program should do
* I can choose the order of commands in a sequence
* I can debug my program
 | To design the parts of a project* I can choose appropriate artwork for my project
* I can decide how each sprite will move
* I can create an algorithm for each sprite
 | To design an algorithm* I can explain what my algorithm should achieve
* I can create an algorithm to meet my goal
* I can use my algorithm to create a program
 | To create a program using my own design* I can choose the images for my own design
* I can create an algorithm
* I can build sequences of blocks to match my design
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| To find more than one solution to a problem* I can identify several possible solutions
* I can plan two programs
* I can use two different programs to get to the same place
 | To use my algorithm to create a program* I can use sprites which match my design
* I can add programming blocks based on my algorithm
* I can test the programs I have created
 | To create and debug a program that I have written* I can plan algorithms for different parts of a task
* I can test and debug each part of the program
* I can put together the different parts of my program
 | To decide how my project can be improved* I can compare my project to my design
* I can improve my project by adding features
* I can debug
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