**Elworth CE Primary School**

**KS1 Programming Skills Progression**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |