Medium Term Plan: Supporting Implementation of LTP/Progression Grid

Subject: Computing – Programming – Events and Actions Year: LKS2 – Year A – Summer

NC/PoS:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

Prior Learning (what pupils already know and can do)
Understanding giving and following instructions, using floor robots to create and debug programs, creating a sequence of commands to follow a routed, using Scratch Jnr to create a program using blocks, how to add music and link to motion

End Points (what pupils MUST know and remember)

- To explain how a sprite moves in an existing project
- To create a program to move a sprite in four directions
- To adapt a program to a new context
- To develop my program by adding features
- To identify and fix bugs in a program
- To design and create a maze-based challenge

Key Vocabulary: sprite, direction, code, duplicate, modify, program, pen, debug, draw

Session 1: Maze Movement

How can we control our sprites? How can we move the sprite in different directions? Can we resize the sprite to fit our background (within the path of the maze)? Can we duplicate and modify code to move the sprite in different directions? How do know if our program has been successful (start and see if sprite exits the maze)?

Vocabulary: sprite, direction, code, duplicate, modify, program

Session 2: Drawing Lines

What might we use the 'pen' tool for? Where in the program will we use the 'pen down' block? How would centring the sprite improve our drawing? How might changing the colour and size of the pen effect our program? If we draw lines that we no longer require, how can we edit the program? Using an existing image, can you predict what the program may have been?

Vocabulary: pen, pen down, recolour, resize, drawing

Session 3: Making a Maze

How can we move our sprite around the maze? How can we make sure our sprite fits onto the background template? How do we ensure that the sprite starts at the beginning of the maze? How can we show how the sprite has moved using the pen tool? How can you check and debug your program? Would you use different pen options to modify your program? How can you show the different routes taken by you and your partner?

Vocabulary: maze, program, path, program, sprite, pen, debug, evaluate, compare

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Future learning this content supports: The content of this unit will support other units on programming sprites and creating and debugging coded images.