ALMOND HILL JUNIOR SCHOOL MEDIUM TERM PLAN

TOPIC TITLE/SUBJECT: Programming B – Events & Actions in Programs **YEAR GROUP: 3** **TERM: Summer**

Vocabulary

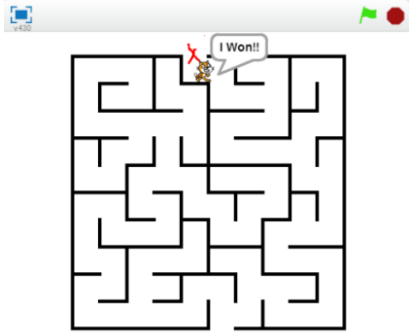
Sprites	Commands
Events	Programs
Actions	Outcomes
Program	Code
Blocks	Design
Sequences	Evaluate

Skills

-To explain how a sprite moves in an existing project (relationship between event and action/keys for actions/ improve programs)
-To create a program to move a sprite in four directions (select character/select size/program movement)
-To adapt a program to a new context (use programming extension/consider real world for design choices/chose blocks for program)
-To develop my program by adding features (identify additional features from a given set of blocks/choose suitable keys/build more sequences and commands)
-To identify and fix bugs in a program (test program against design/match codes to outcomes/modify programs using a design)
-To design and create a maze-based challenge (make design choices with justification/implement design/evaluate project)

What we already know

This unit assumes that learners will have some prior experience of programming. The key stage 1 - floor robots and ScratchJr, however experience of other languages or environments may also be useful. The Year 3 — Programming A unit introduces the Scratch programming environment and the concept of sequences.



Applications/Outcomes

Moving a sprite: Investigate how characters can be moved using 'events'. They will analyse and improve an existing project, and then apply what they have learned to their own projects. They will then extend their learning to control multiple sprites in the same project.
Maze movement: , Program a sprite to move in four directions: up, down, left, and right. They will begin by choosing a sprite and sizing it to fit in with a given background. Learners will then create the code to move the sprite in one direction before duplicating and modifying it to move in all four directions. Finally, they will consider how their project could be extended to prove that their sprite has successfully navigated a maze.
Drawing lines: Introduce learners to extension blocks in Scratch using the **Pen** extension. Learners will use the pen down block to draw lines, building on the movement they created for their sprite in Lesson 2. Learners will then decide how to set up their project every time it is run.
*Adding features: U*se additional **Pen** blocks. They will predict the functions of new blocks and experiment with them, before designing features to add to their own projects. Finally, they will add these features to their projects and test their effectiveness.
Debugging movement: explore the process of debugging, specifically looking at how to identify and fix errors in a program. Learners will review an existing project against a given design and identify bugs within it. They will then correct the errors, gaining independence as they do so. Learners will also develop their projects by considering which new setup blocks to use.
Making a project: Design and create their own projects. Using a template (which can be blank or partially completed), learners will complete projects to move a sprite around a maze, with the option to leave a pen trail showing where the sprite has moved. Ideally, projects will include setup blocks to position the sprite at the start of the maze and clear any lines already on the screen.

Other/Cross Curricular Links
Maths
- Directional vocabulary

Adaptation for SEND
- Adapted tasks
- Adapted resources
- Additional support