Medium Term Plan: Supporting Implementation of LTP/Progression Grid

Subject: Computing – Events and Actions in Programs Year: A – Phase 2 – unit 4/5

NC/PoS:

- Design, write, and debug programs that accomplish specific goals.
- Use sequence, selection, and repetition in programs.

Prior Learning (what pupils already know and can do)

- Understanding sequences and simple commands in Scratch (e.g., "Sequencing Sounds").
- Basic programming knowledge from KS1.

End Points (what pupils MUST know and remember)

- Understand the link between events and actions in programming.
- Create interactive programs with user-controlled sprites.
- Debug and improve programs using logical reasoning.

Key Vocabulary

Event, action, sequence, sprite, debug, pen extension.

Recommended Resources:

- Hardware: Computers or tablets with Scratch installed.
- Software: Scratch (online or offline version).
- Other Resources: Pre-designed maze templates for sprite navigation.

Unplugged activities provide possible opportunities for the children to record.

Curriculum Connections:

- Maths: Applying coordinates and logic for movement.
- Art: Designing sprites and customising backdrops.

Career Opportunities:

- Game Developer: Designing interactive games and programs.
- Animator: Programming sprite movements and actions.

Session 1: Moving a Sprite

Objective: To understand the relationship between events and actions.
Digital Activity: Move a sprite using key presses in Scratch.
Unplugged Activity: Role-play event-action scenarios (e.g., "press forward to move").

Key Vocabulary: Event, action, key press.

Session 2: Maze Movement

Objective: To program a sprite to move through a maze.
Digital Activity: Program movement in four directions (up, down, left, right) using arrow keys.
Unplugged Activity: Navigate a physical maze using printed instructions.

Key Vocabulary: Maze, direction, movement.

Session 3: Drawing Lines

Objective: To use programming extensions to draw with sprites.
Digital Activity: Use the pen extension in Scratch to draw shapes while moving the sprite.
Unplugged Activity: Create a maze on paper and trace lines to simulate sprite movement.

Key Vocabulary: Pen extension, draw, trace.

Session 4: Adding Features

Objective: To enhance programs with additional features.
Digital Activity: Add colour-changing and line-width features using Scratch blocks.
Unplugged Activity: Plan enhancements on a design sheet for a program.

Key Vocabulary: Features, enhance, colour.
Session 5: Debugging Movement Objective: To identify and fix errors in sprite movement programs. Digital Activity: Debug an incomplete Scratch program for maze navigation. Unplugged Activity: Spot and fix mistakes in written pseudo-code. Key Vocabulary: Debug, error, fix.
Session 6: Making a Maze Project Objective: To design and create a complete maze-based project. Digital Activity: Implement a maze program with user controls and pen-tracing features in Scratch. Unplugged Activity: Share projects, explain designs, and gather feedback. Key Vocabulary: Maze, project, feedback.
Future learning this content supports: – Expanding programming knowledge with loops and conditionals in later units. – Creating more complex programs with multiple sprites and user inputs.