










Computing – Year 3



| Autumn 2 | Programming B - Events and actions | | | | | |
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| Prior learning  | This unit assumes that learners will have some prior experience of programming; via the KS1 NCCE units. They will have experienced programming via floor robots; Moving A Robot Year 1 and Robot algorithms Year 2 , alongside the use of ScratchJr through Programming animations Year 1 and Programming quizzes Year 2 . The Year 3 Programming A unit introduces the Scratch programming environment and the concept of sequences. | | | | | |
| Lesson objective  | 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 design, create and debug a maze-based challenge | |
| Key vocabulary  | Motion, event, sprite, algorithm, logic | Move, resize, algorithm | Extension block, pen up, set up | Pen, design, event, action, algorithm | Debugging, errors, setup, Design, code, setup, test, debug, actions, events | |
| Creative context  | Gaming - https://www.bbc.co.uk/teach/class-clips-video/articles/zdp347h | | | | | |
| Substantive knowledge  | 'Events' are used to sense 'inputs', which then trigger scripts to run. | Events and actions can be used to programme a sprite to move around a maze. | Initialisation is the process of setting starting values (variables) for a program, so that the program starts in the same way each time. | Pen extensions can be used to program a sprite to draw on a project. | Debugging is the process of finding and fixing those errors. | |
| Disciplinary knowledge  | Sprites can be moved by using the mouse and keyboards to trigger event blocks. | Sprites can be moved by using the mouse and keyboards to trigger event blocks. Sprites can be resized. Action commands can be duplicated to create a series of actions. | Drawings can be created when the sprite moved by using the pen down command. Sprites can be re-centred to ensure they start in the same place. | Pen extensions can be used to erase all, pen up, pen down, set pen colour to, change pen size by (1) and change pen size by (-1). | When debugging a project, they need to review the task, Test the project, Identify the bug, Fix the bug, Test the bug fix. | |
| Recorded learning  | Children to create and trail a set of commands to move | Children to create and trial a project where a sprite moves through | Children to create and trail a project where the sprite draws a | Child to plan and create a project that: Moves a sprite, draws a line, Draws lines that | Children to design, create and debug a project (Assessment piece – save this). | |

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| | the sprite (Activity 1 and 2). | a maze (Activity 1 and 2). | shape (Activity 1 and 2) | look different and Removes all the lines drawn. | | |
| Outcome for unit  | <p>As the final assessment piece, please make sure that the final project is saved.</p> <p>At the end of lesson, please complete the unit assessment (slide in the folder) by adding the children’s name into a table to determine whether they can do the statement independently, with some help or not at all. This could be teacher or self-assessment.</p> | | | | | |
| Future learning  | <p>Children will complete planning lessons in years 4, 5 and 6 which will lead on from this unit.</p> | | | | | |