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| **Lent 1: Programming A: Moving a Robot**  **Subject Computing Year 1 Medium Term Planning** | | | | | | |
| **National Curriculum Objectives**   * Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions * Create and debug simple programs * Use logical reasoning to predict the behaviour of simple programs * Recognise common uses of information technology beyond school | | | | | | |
|  | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 |
| **Learning intention for each lesson:** | I know how to explain what a given command will do | I know how to act out a given word | I know how to combine ‘forwards’ and ‘backwards’ commands to make a sequence | I know how to combine four direction commands to make sequences | I know how to plan a simple program | I know how to find more than one solution to a problem |
| **Recall and retrieval** | * To identify types of technology we use. | * Where will the robot go if I press … | * Follow a simple set of instructions. | Show me backwards and forwards | Show me left and right | How do you make the robot go…left,right,backwards,forwards? |
| **Sequence of knowledge throughout the lesson**  **:** | **Key knowledge**   * I know how to predict the outcome of a command on a device * I know how to match a command to an outcome * I know how to run a command on a device | **Key knowledge**   * I know how to follow an instruction * I know how to recall words that can be acted out * I know how to give directions | **Key knowledge**   * I know how to compare forward and backward movements * I know how to start a sequence from the same place * I know how to predict the outcome of a sequence involving ‘forwards’ and ‘backwards’ commands | **Key knowledge**   * I know how to compare left and right turns * I know how to experiment with ‘turn’ and ‘move’ commands to move a robot * I know how to predict the outcome of a sequence involving up to four commands | **Key knowledge**   * I know how to explain what my program should do * I know how to choose the order of commands in a sequence * I know how to debug my program | **Key knowledge**   * I know how to identify several possible solutions * I know how to plan two programs |
| **Scaffolding** | Use the gp button. | Supported to correctly identify directional moves | Practical practise of forward and backwards | Practical practise to know left and right. | Support to create a simple program. | Guided plan from one point to another. |
| **Challenge** | Investigate and explain other functions. | To use directional language for a simple sequence. | To use forwards and backwards for a sequence of directions. | To use left and right for a sequence of directions. | To debug a simple program,. | More complex route.  More than one route. |
|  | **Key Vocabulary**  Forwards, backwards, turn, clear, go, commands | **Key Vocabulary**  Instructions, directions | **Key Vocabulary**  Forwards, backwards, commands | **Key Vocabulary**  Left, right, turn, commands | **Key Vocabulary**  Plan, algorithm, program | **Key Vocabulary**  Route, plan, program |