**Year 1 Computing Curriculum – Spring Term 1**

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| **Theme: Moving a robot** | | | | | | | | | |
| **Curriculum objectives** | | | **Vocabulary** | | | | | | **Links across the curriculum** |
| -To explain what a given command will do  -To act out a given word  -To combine forwards and backwards commands to make a sequence  -To combine four direction commands to make sequences  -To plan a simple program  -To find more than one solution to a problem | | | **Keyword** | Definition | sequences | a pattern or process in which one thing follows another. | | | **Geography** – Using direction and positional language  **PSHE** – taking turns and working as a team  **English** – writing instructions  **Science** – making predictions | |
| forwards | towards a place or time that is further on; ahead | directions | guidance on where to go | | |
| backwards | in the direction of or toward the back | route | a way of getting from one place to another | | |
| turn | to move around a point | plan | an action you want to take | | |
| commands | to order or instruct | program | a plan of what will be done | | |
| instructions | to give an order | algorithms | a determined and finite procedure for solving a problem | | |
| **Prior Knowledge:**  EYFS – To follow two step instructions | | | | | **Future Knowledge:**  Year 2 - To create and debug a program. Year 3 - Sequencing Sounds  Year 4 – Repetition in Sounds to modify a count-controlled. Year 5 - control a simple circuit connected to a computer. Year 6 - To choose how to improve a game by using variables | | | | |
| **Lesson Sequence** | | **Key Knowledge** | | | | | **Key Skills** | | |
| 1. To explain what a given command will do | | * To know that Robots have buttons to turn, go and move. * Robots have buttons for commands. | | | | | * Predict the outcome of a command on a device * To run a command on a device | | |
| 1. To act out a given word | | * The instruction ‘walk’ starts a process without an end. A human might ask how far they should go, or they may stop if they encounter an obstacle. If a robot could be issued with the command ‘walk’, it would start a continuous process that wouldn’t be stopped and could cause the robot to walk into obstacles. A more suitable instruction would be ‘step’. | | | | | * To follow an instruction * Recall words that can be acted out * To give directions | | |
| 1. To combine forwards and backwards commands to make a sequence. | | * To know that a sequence is a set of instructions to follow in order. * Robots can be programmed to move forwards and backwards. | | | | | * Compare forwards and backwards movements * To start a sequence from the same place * To predict the outcome of a sequence involving forwards and backwards commands | | |
| 1. To combine four direction commands to make sequences. | | * To know a left turn and a right turn. | | | | | * Compare left and right turns * To experiment with turn and move commands to move a robot * Predict the outcome of a sequence involving up to four commands | | |
| 1. To plan a simple program. | | * To plan a simple program. | | | | | * Explain what my program should do * Choose the order of commands in a sequence * To debug my program | | |
| 1. To find more than one solution to a problem. | | * To understand the concept of there being more than one way to solve a problem. | | | | | * To identify several possible solutions * Plan two programs * To use two different programs to get to the same place | | |
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| **Themes and links** | | | | | | | | | |
| **Computing themes** | **Where these are covered:** | | | | | | | **Links across the ----- curriculum** | |
| **Technology around us**  Autumn 1 | * Using robots around the world * What we use robots for | | | | | | | |  |  | | --- | --- | | **EYFS** | To listen to instructions | | **2** | Create and debug a program | | **3** | Sequence sounds | | **4** | Repetition in Sounds | | **5** | Simple circuits | | **6** | Variables in programming | | |
| **Digital painting**  Autumn 2 | * Robots on a device | | | | | | |
| **Programming A**  Spring 1 | * Programming a set of instructions | | | | | | |
| **Data /information**  Spring 2 | * Writing instructions using left, right and how many turns. | | | | | | |
| **Creating media**  Summer 1 | * Creating algorithms for the robots. | | | | | | |  | |
| **Programming B**  Summer 2 | * Programming animations. To choose a command for a given purpose. | | | | | | |