**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 SoundsYear 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
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| 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
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| 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
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| 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
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| 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
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| 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
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| **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 |

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| **Digital painting** Autumn 2  | * Robots on a device
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| **Programming A** Spring 1  | * Programming a set of instructions
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| **Data /information** Spring 2  | * Writing instructions using left, right and how many turns.
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| **Creating media** Summer 1  | * Creating algorithms for the robots.
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| **Programming B** Summer 2  | * Programming animations. To choose a command for a given purpose.
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