**Year 1 Computing Curriculum – Spring Term 2**

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| **Theme: Introduction to Animation** |
| **Curriculum objectives** | **Vocabulary** | **Links across the curriculum** |
| - 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 | **Keyword** | Definition | sequences | a pattern or process in which one thing follows another. | [**Computing**](https://assets.publishing.service.gov.uk/media/5a7c576be5274a1b00423213/PRIMARY_national_curriculum_-_Computing.pdf)* 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

[**Maths**](https://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study/national-curriculum-in-england-mathematics-programmes-of-study#Key%20Stage%201%20-%20Years%201%20and%202)**Measure*** Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]

**Geometry - position and direction*** describe position, direction and movement, including whole, half, quarter and three-quarter turns

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| ScratchJr,  | The program being used. | value | The worth of something  |
| command | To direct with control | design | To create using a medium |
| sprite | The character that is moving | compare | To note similarities and differences |
| programming | The act of writing a programme | predict | To foretell the future |
| program | Information provided |  |  |
| **Prior Knowledge:**EYFS – To follow two step instructions | **Future Knowledge:**Year 1 – Moving a Robot; 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 Comparing tools | During this lesson learners will become accustomed to the ScratchJr programming environment. They will discover that they can move characters on-screen using commands, and compare ScratchJr to the Bee-Bots used in the previous unit. | To choose a command for a given purpose* I can find the commands to move a sprite
* I can use commands to move a sprite
* I can compare different programming tools
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| 2 Joining blocks | During this lesson learners will discover that blocks can be joined together in ScratchJr. They will use a **Start** block to run their programs. They will also learn additional skills such as adding backgrounds and deleting sprites. Learners will follow given algorithms to create simple programs. | To show that a series of commands can be joined together* I can use more than one block by joining them together
* I can use a **Start** block in a program
* I can run my program
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| 3 Make a change | During this lesson learners will discover that some blocks in ScratchJr have numbers underneath them. They will learn how to change these values and identify the effect on a block of changing a value. | To identify the effect of changing a value* I can find blocks that have numbers
* I can change the value
* I can say what happens when I change a value
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| 4 Adding sprites | During this lesson learners will be taught how to add and delete sprites in ScratchJr. They will discover that each sprite has its own programming area, and learn how to add programming blocks to give instructions to each of the sprites.  | To explain that each sprite has its own instructions* I can show that a project can include more than one sprite
* I can delete a sprite
* I can add blocks to each of my sprites
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| 5 Project design | During this lesson learners will choose appropriate backgrounds and sprites for a ‘Space race’ project. They will decide how each sprite will move, and create an algorithm based on the blocks available in ScratchJr that reflects this. | To design the parts of a project* I can choose appropriate artwork for my project
* I can decide how each sprite will move
* I can create an algorithm for each sprite
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| 6 Following my design | During this lesson learners will use their project designs from the previous lesson to create their projects on-screen in ScratchJr. They will use their project design, including algorithms created in the previous lesson, to make programs for each of their rocket sprites. They will test whether their algorithms are effective when their programs are run. | To use my algorithm to create a program* I can use sprites that match my design
* I can add programming blocks based on my algorithm
* I can test the programs I have created
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| **Themes and links** |
| **Computing themes** | **Where these are covered:** |
| **Technology around us** Autumn 1  | * Using robots around the world
* What we use robots for
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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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