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

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| **Theme: Programme Quizzes** |
| **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- Use technology purposefully to create, organise, store, manipulate and retrieve digital content | **Keyword** | Definition | algorithm | A group of numbers that are related | [**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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| sequence | A series of patterns and events | debug | Increasing in number |
| modify | A direction applied to something to create an outcome | evaluate | To analyse and assess the impact of something |
| outcome | The result of something that has been input | decomposition | A mathematical term linked to place value and the bridging of 10 |
| sprite | The object or character that you are controlling | design | To create something by oneself |
| evaluate  | To change something in order to improve it |  |  |
| **Prior Knowledge:**EYFS – To follow two step instructions. Year 1 – Commands for a robot. Year 2 – Robot Algorithms | **Future Knowledge:**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** |
| ScratchJr recap  | During this lesson, learners will recap what they know already about the ScratchJr app. They will begin to identify the start of sequences in real-world scenarios, and learn that sequences need to be started in ScratchJr. Learners will create programs and run them in full-screen mode using the **Green flag**. | To explain that a sequence of commands has a start* I can identify the start of a sequence
* I can identify that a program needs to be started
* I can show how to run my program
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| Outcomes  | During this lesson, learners will discover that a sequence of commands has an ‘outcome’. They will predict the outcomes of real-life scenarios and a range of small programs in ScratchJr. Learners will then match programs that produce the same outcome when run, and use a set of blocks to create programs that produce different outcomes when run. | To explain that a sequence of commands has an outcome* I can predict the outcome of a sequence of commands
* I can match two sequences with the same outcome
* I can change the outcome of a sequence of commands
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| Using a design | During this lesson, learners will be taught how to use the **Start on tap** and **Go to page** (**Change background**) blocks. They will use a predefined design to create an animation based on the seasons. Learners will then be introduced to the task for the next lesson. They will predict what a given algorithm might mean. | To create a program using a given design* I can work out the actions of a sprite in an algorithm
* I can decide which blocks to use to meet the design
* I can build the sequences of blocks I need
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| Changing a design  | During this lesson, learners will look at an existing quiz design and think about how this can be realised within the ScratchJr app. They will choose backgrounds and characters for their own quiz projects. Learners will modify a given design sheet and create their own quiz questions in ScratchJr. | To change a given design* I can choose backgrounds for the design
* I can choose characters for the design
* I can create a program based on the new design
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| Designing and creating a program  | During this lesson, learners will create their own quiz question designs including their own choices of question, artwork, and algorithms. They will increase the number of blocks used within their sequences to create more complex programs. | To create a program using my own design* I can choose the images for my own design
* I can create an algorithm
* I can build sequences of blocks to match my design
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| Evaluating  | During this lesson, learners will compare their projects to their designs. They will think about how they could improve their designs by adding additional features. They will modify their designs and implement the changes on their devices. Learners will find and correct errors in programs (debug) and discuss whether they debugged errors in their own projects. | To decide how my project can be improved* I can compare my project to my design
* I can improve my project by adding features
* I can debug my program
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| **Themes and links** |
| **Computing themes** | **Where these are covered:** |
| **Technology around us** Autumn 1  | * The use of Robots in our 21st century world
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| **Digital painting** Autumn 2  | * To use robots for artwork
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| **Programming A** Spring 1  | * Programming and giving commands to the robots
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| **Data /information** Spring 2  | * Storing the Algorithms and understanding clear and precise instructions
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| **Creating media** Summer 1  | * Decomposition and Debugging of Algorithms
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| **Programming B** Summer 2  | * Variables in programming and what to do to debug
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