<table>
<tr><td>Subject: Computing<br>Programming B</td><td>Year group: Year 1</td><td>Topic:<br>Programming B- ANNIMATION</td><td rowspan="2">Initiation & activation activities:<br>Use school360 to produce an animation and blog onto school website</td></tr>
<tr><td colspan="2">Prior knowledge required: This unit progresses learners' knowledge and understanding of programming and follows on from 'Programming A – Moving a robot', where children will have learned to program a floor robot using instructions.</td><td>Vocabulary:<br>ScratchJr, command, sprite, compare, programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design.</td></tr>
<tr><td colspan="4">Programme of Study: Year 1 & 2<br>• Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions<br>• Create and debug simple programs<br>• Use logical reasoning to predict the behaviour of simple programs</td></tr>
<tr><td colspan="4">● Implementation<br><br>Knowledge skills and understanding<br><br>When programming, there are four levels that can help describe a project, known as levels of abstraction. Research suggests that this structure can support learners in understanding how to create a program and how it works:<br>• Task – what is needed<br>• Design – what it should do<br>• Code – how it is done<br>• Running the code – what it does<br>Spending time at the 'task' and 'design' levels before engaging in code writing aids learners in assessing the achievability of their programs, and reduces a learner's cognitive load during programming.<br><br>Greater Depth<br><br>● Children to debug program independently</td></tr>
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| • Can they predict the position of the sprite before programming | | |
| | IMPACT | ASSESSMENT/EVALUATION |
| To choose a command for a given purpose<br>• I can find the commands to move a sprite<br>• I can use commands to move a sprite | **1 Comparing tools**<br><br>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 show that a series of commands can be joined together<br>• I can use more than one block by joining them together<br>• I can use a **Start** block in a program<br>I can run my program | **2 Joining blocks**<br><br>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 identify the effect of changing a value<br>• I can find blocks that have numbers<br>• I can change the value<br>I can say what happens when I change a value | **3 Make a change**<br><br>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 explain that each sprite has its own instructions<br>• I can show that a project can include more than one sprite<br>• I can delete a sprite<br>I can add blocks to each of my sprites | **4. Add and delete sprites**<br><br>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 design the parts of a project<br>• I can choose appropriate artwork for my project<br>• I can decide how each sprite will move<br>I can create an algorithm for each sprite | **5 Project design**<br><br>During this lesson learners will choose appropriate backgrounds and sprites for a 'Space race' project. They will decide how each sprite will move, and | |

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| | create an algorithm based on the blocks available in ScratchJr that reflects this. | |
| To use my algorithm to create a program<br>• I can use sprites that match my design<br>• I can add programming blocks based on my algorithm<br>I can test the programs I have created | **6 Following my design**<br>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. | |
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**Commented [SH1]:**