Brough Primary School – Curriculum Intention Plan 2023 - 2024

Subject: Computing Year Group: Year 1/2	Area of learning: Computing - Programming using Scratch Jr - Twinkl
Links to previous work/Remember when	Using Beebots - To understand that programs execute by following precise and unambiguous instructions. To create and debug simple programs. English - To describe and use instructions.
Term	**Key Skills to be taught**
Spring 1 2024 What the children should know at the end of this series of lessons	This unit introduces children at Key Stage 1 to the principles of coding, using the age-appropriate ScratchJr software. The platform encourages basic understanding of algorithms and how to create precise instructions for visual working programs. It begins to develop a sense of creating, debugging and logical reasoning, which are required for further programming at KS2.

Vocabulary
algorithms, programs, digital devices, debug, instructions, programmers, input, output, predict, speed, distance, backgrounds, grow, shrink, record, sound

Sequence of learning	Learning Objectives/Outcomes	suggested Lesson Outline
1	**Learning Objective:** To understand that programs execute by following precise and unambiguous instructions. To use logical reasoning to predict the behaviour of simple programs. **Key Knowledge:** Children see a demonstration of a ScratchJr program being created that follows precise instructions. During the sequence, they predict what will happen and afterwards	**Recap** – What is it? ScratchJr is an app available for tablets (such as Apple, Amazon and Android tablets) that allows you to create your own stories and games. Encourage children to watch the demo on their own (or shared) tablet device, guided by an adult. Pause to predict what blocks might do. Ask what children think the blue arrow blocks do? What will an arrow followed by the invisible block do? Tell children there are many more blocks we can learn about in future lessons to create more complex programs! *Use the Watch Demo Activity Sheet as a guide.* Demonstrate starting a new project. Focus on how to add new characters and backgrounds, matching them to each other for suitability.

	begin adding or editing their own characters and backgrounds.	
2	**Learning Objective:** To understand that programs execute by following precise and unambiguous instructions. To create and debug simple programs. **Key Knowledge:** Children create new projects incorporating the programming blocks for grow and shrink, connecting them in sequence.	**Recap** – Show a selection of instruction blocks from ScratchJr and ask children to remember or suggest what effect each one will have. Can children describe the effects that the blocks have upon the character? Focus on the blocks for grow and shrink and discuss their effect. Note the value with the block and how this can be altered to make the sprite grow or shrink at a different rate. Showing a screenshot of the farm background with a chicken and prickly plant added, ask what would happen if we tap on the 'grow' and 'shrink' blocks when selecting the chicken. Establish that we can use the blocks to change the size of the chicken.
3	**Learning Objective:** To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. To create and debug simple programs. To use logical reasoning to predict the behaviour of simple programs. **Key Knowledge:** Children use the context of an animated car (or cars) travelling along a road on a city background. Movement blocks are combined with blocks to change speed, iterations or repetition to program the cars.	**Recap** – Recap the different ways of starting a sequence of instruction blocks. Can children remember what each block does and how it works? Display some end blocks to demonstrate that good code should have a start and an end. We can choose to either run a sequence of blocks once or use the 'REPEAT FOREVER' block to keep running the sequence. Show the screenshot of the car on the road. Can children identify the correct block to make it move in the right direction along the road? How do we make it go further? What do children predict will happen when it reaches the end of the screen? Note: the sprite automatically reappears back on the other side of the screen, continuing its instructions sequentially. Show a selection of blocks. Can children identify which block would be used to make the car smaller, to fit the size of the road? Which block would be used to make the car travel faster? Note: the latter is a new block to be introduced so children won't be familiar with it.

4	**Learning Objective:** To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. To create and debug simple programs. To use logical reasoning to predict the behaviour of simple programs. **Key Knowledge:** In the context of a spaceman's movement floating in space, children use the REPEAT FOREVER block and then the REPEAT block in order to create repetition of an instruction sequence. A prediction should always be made about each code before trying it out.	**Recap** – Can children suggest any blocks which make a sprite move? Where would those blocks be? Show screenshot with movement blocks visible and establish the purpose of each. Remind children that the last lesson focused mainly on moving in one direction (to the right) but with the Underwater sea creatures, various different directions were used. Show the screenshot of the spaceman sprite, matched to a suitable background. Which direction might he move in, if he was floating in space? Establish that he may move in many different directions, so we are going to build a sequence of blocks to create this movement. Show the sequence with the REPEAT FOREVER block at the end. Can children describe what effect this block has? Tell children that we don't want the spaceman to keep repeating the sequence forever, just to do it a certain number of times. To do this, we use a REPEAT BLOCK, placed around the blocks we want to be repeated – and say how many times to do it. (It may be helpful to demonstrate this on a tablet at this point.)
5	**Learning Objective:** To understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions. To create and debug simple programs. **Key Knowledge:** Children record animal sounds and then create simple programs to play the recorded sound,	**Recap** – Begin by providing children with a range of images for ScratchJr blocks, using the Scratch Junior Blocks Sheet and allow them to identify together which blocks they recognise and can describe the effects for. Can children predict what any of the other blocks do? Use the Lesson Presentation to show the blocks for recording and playing sounds and for adding speech bubbles. Ask what children think they are for and then describe their purpose. Using the Lesson Presentation, display some of the animal sprites available on ScratchJr, along with speech bubbles. Allow children to have fun demonstrating animal sounds, while clicking to

	when the animal is clicked.	display a text version of the sound inside the speech bubbles.

Learning Outcome/product
To open the ScratchJr app and start a new project; • Add new characters and backgrounds; • Use blocks for movement in different directions; • Create short sets of sequenced instructions.

Assessment records	**List only those children who have not achieved the expected outcomes.**