

	<p>Year group: Year 1</p>	<p>Area/topic: Algorithms - Animations on Scratch Jr (Summer 2)</p>
<p>(objectives from NC/ELG/Development matters)</p> <p>Pupils to be taught:</p> <ul style="list-style-type: none"> • 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. 		

Prior learning	Future learning
<ul style="list-style-type: none"> • Children would have explored what an algorithm is during their Year 1 Spring term units. In these units they were taught that an algorithm is a set of instructions that we input to create a computer to do something. They explored programming a Beebot in Year 1. They will use this knowledge to create an algorithm for a sprite to follow on Scratch Jr. 	<ul style="list-style-type: none"> • In Year 2 the children will revisit 'animations' when they create a stop motion video during Summer 2. They will also revisit how to use Scratch Jr for a purpose during their programming quizzes unit during Year 2 Spring 2.

What pupils need to know or do to be secure

Key knowledge and skills

- Children to understand what the different coloured blocks are on Scratch and what they do.
- Children need to understand that they must start each algorithm with the green flag block and must end it with the red block.
- Children to create an algorithm by dragging the different coloured blocks onto the script area.
- Children to explain what effect that algorithm has had on their sprite.
- Children to debug their algorithm to improve the results.

Possible evidence

- Children to use the different coloured blocks from Scratch Jr to programme their friend before using them on the iPad.
- Children to create their own short animation on Scratch Jr by creating an algorithm.
- Children could have a mini movie premiere where they watch each other's animations.

Key vocabulary

- **Scratch Jr** - An app used to support children with programming.
- **Sprite** - A character on Scratch Jr.
- **Animation** - A film making technique where images are manipulated to create a mini movie.
- **Instructions** - A direction or order.
- **Sequence** - A basic algorithm. A set of logical steps carried out in order.
- **Program** - A set of ordered commands that can be ran by a computer to complete a task.
- **Blocks** - Blocks are different coloured puzzle pieces which can be joined together to create an algorithm.
- **Script** - The set of instructions on Scratch Jr that cause the sprite to move.
- **Debug** - To edit and change an algorithm to make it better.

Common misconceptions

- Children have recently been used to programming a Beebot where they can just press the button they need to get the Beebot to move. Children will need to understand that with Scratch Jr, they have to drag and drop the blocks to create the whole algorithm first and it must also start with the green flag and end with the red block.

Books linking to this area

<i>Memorable first hand experiences</i>	<i>Opportunities for communication</i>
<ul style="list-style-type: none">• Children will create their own mini animation using Scratch Jr.• Children could have a mini movie premiere to watch and review each other's animations.	<ul style="list-style-type: none">• Children will be encouraged to discuss what effect their algorithm has had on the Sprite.

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Reasonable adjustments for pupils with SEND

<p><i>Communication and Interaction</i></p> <ul style="list-style-type: none">• Make sure the children are using the correct equipment for them.• Consider headphones to support the child to hear.• Have someone available to read any text that is on the screen.	<p><i>Cognition and Learning</i></p> <ul style="list-style-type: none">• Consider adjusting the brightness and colour so they can see the screen more easily.• Have someone available to read any text that is on the screen.• Shorter steps given at appropriate time.• Simpler logins.• Adult to support with logging in.• Print out which the different functions and tools on.• Step by step guide printed out for them to refer to.
<p><i>Social, Emotional and Mental health</i></p> <ul style="list-style-type: none">• Timer so they understand when they will need to log off.• Clear boundaries.• Online safety instructions made clear.	<p><i>Sensory and Physical</i></p> <ul style="list-style-type: none">• Larger text/equipment.• Print offs instead of screen time.• Appropriate desk, chair, keyboard and mouse.