

BRUNSHAW PRIMARY SCHOOL



Inspiring children to be resilient and aspirational learners, within a positive and considerate community

Subject: Computing	Year group: 2 Term: Spring 1	Title: Robot algorithms
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<p>What should I already know?</p> <ul style="list-style-type: none">• Words such as ‘forwards,’ ‘backwards’ and ‘turn’ can be enacted• Commands have different outcomes• The outcome of a command can usually be predicted• A program is a set of commands that a computer can run• A series of instructions can be issued before they are enacted	<p>Facts I will learn</p> <ul style="list-style-type: none">• A series of instructions is a sequence• When the order of instructions changes, so might the outcome• The outcome of a program can be predicted	<p>Key questions</p> <ul style="list-style-type: none">• Can I give and follow precise instructions?• What happens when we change the order of instructions?• Can I predict the outcome of a program?• Can I design a mat for a floor robot?• Can I design an algorithm?• Can I create a program and debug it?														
<p>Key Skills</p> <ul style="list-style-type: none">• To choose a series of words that can be enacted as a sequence• To choose a series of instructions that can be run as a program• To create a program• To trace a sequence to make a prediction• To run a program on a device• To debug a program that I have written	<p>Experiences that school will provide</p> <ul style="list-style-type: none">• Using IT for a range of real-life situations• Use of a range of hardware and software	<table><tr><th>Key vocab</th><th>Definition</th></tr><tr><td>Instructions</td><td>Detailed information about how something should be done</td></tr><tr><td>Sequence</td><td>The order in which instructions occur and are processed</td></tr><tr><td>Algorithm</td><td>A precise set of ordered steps that can be followed by a human and implemented on a computer to achieve a task</td></tr><tr><td>Unambiguous</td><td>Clear and precise</td></tr><tr><td>Program</td><td>A set of ordered commands that can be run by a computer to complete a task</td></tr><tr><td>Order</td><td>The arrangement of things in relation to each other</td></tr></table>	Key vocab	Definition	Instructions	Detailed information about how something should be done	Sequence	The order in which instructions occur and are processed	Algorithm	A precise set of ordered steps that can be followed by a human and implemented on a computer to achieve a task	Unambiguous	Clear and precise	Program	A set of ordered commands that can be run by a computer to complete a task	Order	The arrangement of things in relation to each other
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<p>Web links</p> <ul style="list-style-type: none">• Smartie the Penguin Childnet A story to teach children aged 3 – 7 how to be safe on the internet	<p>Experiences that could be provided at home</p> <p>Take turns with your child to guide each other around an obstacle course while blindfolded. Can you make</p>															

<ul style="list-style-type: none">Bee-Bot Online Emulator A virtual Bee-Bot to command around different activity mats	your directions unambiguous enough so that no mistakes are made?	Prediction	What someone thinks will happen
		Route	A way or course taken in getting from a starting point to a destination
		Debug	The process of finding and correcting errors in a program
		Decomposition	To break down a task into smaller, more achievable steps