

Computing 3 Key Learning Points	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 6	<p><u>Sprites, behaviours, events and inputs</u></p> <ul style="list-style-type: none"> - Know that computer simulations can be used to collect data about a model. - Know that AI plays a role in everyday life. - Know that events are actions which trigger behaviours in a program. 		<p><u>Inputs and variables</u></p> <ul style="list-style-type: none"> - Know how to use more complex events to change how a program runs. - Know how to recognise a variable in a program. - Know how to create and control multiple sprites. 		<p><u>Machine learning</u></p> <ul style="list-style-type: none"> - Know how to train and test an AI machine. - Know that computer simulations can be used to collect data about a model. - Know that AI plays a role in everyday life. 	<p><u>Computer Science - Physical Computing</u></p> <ul style="list-style-type: none"> - Know how to create a variable to track and record data. - Know how to connect a Micro:bit. - Know how to program multiple inputs.
Year 5	<p><u>Sprites, Events & Game design</u></p> <ul style="list-style-type: none"> - Know how to create new sprites and assign them costumes and behaviours. - Know that prior coding knowledge can be applied in different environments. - Know how to create an interactive computer program. 		<p><u>Functions</u></p> <ul style="list-style-type: none"> - Know how to create groups of sprites, and control a single sprite from the group using events. - Know how to use a conditional statement to check for a winning score - Know how to use a variable that stores information and changes over time 		<p><u>Conditionals</u></p> <ul style="list-style-type: none"> - Know how to assign sprites and develop game mechanics. - Know that functions can be used to simplify complex programs. - Know how to use predetermined functions to complete tasks. 	<p><u>Computer Science: Physical Computing</u></p> <ul style="list-style-type: none"> - Know that conditionals can be used in order to trigger events. - Know how to program multiple inputs and outputs. - Know how to use loops with conditionals.

<p>Year 4</p>	<p><u>Debugging & Events</u> - Know that bugs are errors in a program and can be fixed with debugging. - Know that nested loops can make a program more efficient. - Know that conditionals only run if something is 'true'.</p>		<p><u>Loops, Nested Loops and Conditionals</u> - Know how to find and correct bugs in a program. - Know how to use a greater range of event blocks. - Know how to use nested loops.</p>		<p><u>Conditionals</u> - Know how to use conditionals. - Know that bugs are errors in a program and can be fixed with debugging. - Know that nested loops can make a program more efficient.</p>	<p><u>Computer Science - Physical Computing</u> - Know that conditionals will only run if something is 'true'. - Know that loops can be used to indicate how often a sequence will run. - Know that variables can be used to trigger outputs.</p>
<p>Year 3</p>	<p><u>Sequencing and Control</u> - Know that predictions can be used to help find solutions to problems. - Know that programs can be modified to remove bugs. - Know how to find a bug and attempt to fix it.</p>		<p><u>Loops & Events</u> - Know how to use loops to make a program more efficient. - Know how to make a game using multiple event blocks. - Know that predictions can be used to help find solutions to problems.</p>		<p><u>Events</u> - Know that programs can be modified to remove bugs. - Know how to find a bug and attempt to fix it. - Know how to use loops to make a program more efficient.</p>	<p><u>Computer Science - Physical Computing</u> - Know that loops can be used to repeat commands. - Know that a variable holds changing information. - Know how to use sequencing to create an animation.</p>
<p>Year 2</p>	<p><u>Physical Computing - Bee Bots</u></p>		<p><u>Computer Science - Sequencing</u> - Know that loops can be used to</p>		<p><u>Count Controlled Loops</u> - Know how to break down long</p>	<p><u>Events</u> - Know that loops can be used to reduce the number</p>

	<ul style="list-style-type: none"> - Know that an algorithm is a series of instructions. - Know how to follow multi-step instructions given by someone else. - Know how to give clear instructions. 		<ul style="list-style-type: none"> reduce the number of blocks of code used. - Know that there are benefits of loops rather than manual repetition. - Know that blocks of code can be used to create sequences. 		<ul style="list-style-type: none"> sequences using loops. - Know how to use simple event blocks. - Know that event blocks can trigger behaviours. 	<ul style="list-style-type: none"> of blocks of code used. - Know that there are benefits of loops rather than manual repetition. - Know that blocks of code can be used to create sequences.
Year 1	<p><u>Physical Computing - Bee bots</u></p> <ul style="list-style-type: none"> - Know that predictions can be made about what might happen. - Know that a command is an instruction for controlling a robot. - Know that robots can follow a sequence of instructions. 	<p><u>Computer Science - Sequencing</u></p> <ul style="list-style-type: none"> - Know that blocks of code can be used to control an on-screen sprite. - Know that commands must be sequenced in a logical order. - Know that codes can be repeated. 	<p><u>Computer Science - Sequencing</u></p> <ul style="list-style-type: none"> - Know that a loop block can be used to repeat instructions. - Know how to program a virtual robot to follow instructions. - Know how to click and drag blocks. 		<p><u>Computer Science - Loops</u></p> <ul style="list-style-type: none"> - Know how to begin to debug a simple program. - Know how to break down a long sequence of instructions. - Know that blocks of code can be used to control an on-screen sprite. 	<p><u>Computer Science - Events</u></p> <ul style="list-style-type: none"> - Know that commands must be sequenced in a logical order. - Know that codes can be repeated. - Know that a loop block can be used to repeat instructions.