




Year 3- Programming

<p>Concepts</p>	 <p>Presentation Expressing ideas</p> <p>Presentation</p>	 <p>Systems Knowing how to create and use programmes</p> <p>Systems</p>	 <p>Digital World Knowing how to use a range of technology</p> <p>Digital world</p>
<p>Curriculum Objectives</p>			
<ul style="list-style-type: none"> • design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • use sequence, selection, and repetition in programs; work with variables and various forms of input and output • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 			
<p>Learning Overview</p>			
<ul style="list-style-type: none"> • Introduction to Lightbot on iPads or PCs. • Discuss robots- they only do as they are told and cannot (yet) think for themselves. They are controlled by algorithms – lines of code written by humans. Lightbot can only do as it is told. The fewer different algorithms the better. • Demonstrate what to do to light up the blue squares. What happens if it doesn't work? (bugs- we must debug). Relate debugging to simple procedures such as cooking- if you miss a step (e.g. 'turn on the oven') it won't work. • Children to work through Lightbot puzzles. • Model how to use loops and procedures • Use code.org course C to model writing lines of code to control a sprite. Children work through the course from the beginning. Discuss bugs- what are they and how do we fix them? Use course 2 debugging levels to focus on bugs. 			