



Curriculum Plans – Key Stage 3 Computer Science

Please find below a detailed outline of the curriculum covered in Computer Science through Year 7 in Key Stage 3.

Year 7

	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7
Module name and information	<p>Think like a Computer Scientist and introduction to Python</p> <p>Students will learn about the key concepts of computational thinking, decomposition, abstraction and writing algorithms. Students will learn the basics of Python including inputs and outputs and using Turtle to draw shapes.</p>	<p>Introduction to programming with Python and Robotics</p> <p>Students will learn the basics of Micro Python for Lego robotics. Building the robots and programming them, applying knowledge from block 1.</p>	<p>Binary Code and under the hood</p> <p>Students will look at Binary code and how it is used by computers. Students will also learn how to convert binary to denary and denary to binary. Students will learn about the history of computing and computer hardware.</p>	<p>E-Safety</p> <p>Students will look at key elements of e-safety; data protection, social media and cyberbullying</p>	<p>Introduction to Programming</p> <p>Students will program using block coding and compete in the COBIS and Discovery Education global coding competition.</p>	<p>Representing Images</p> <p>Students will learn about how images are formed as bitmaps and vectors and will create their own pixel game character.</p>	<p>Creating an animation</p> <p>Students will use their programming and image creation skills in Scratch to produce an animation.</p>
Assessment	<p>Project-Based Assessment/Quiz</p> <p>Produce an algorithm, produce Python scripts.</p>	<p>Project-Based Assessment/Quiz</p> <p>Produce Python scripts and program robots to move.</p>	<p>Quiz/Project based Assessment/Quiz</p> <p>Convert Binary numbers.</p>	<p>Group Project Based Assessment/Quiz</p> <p>Produce materials for safer internet day</p>	<p>Project based Assessment/Quiz</p> <p>Produce a useful app for the competition</p>	<p>Project based assessment/Quiz</p> <p>Produce a pixel game character</p>	<p>Project-Based Assessment/Quiz</p> <p>Produce a dance based animation</p>