

Key Stage 3 Curriculum Map 2018-19 – Computing and IT

Term	Year 7	Year 8	Year 9
1	<p style="text-align: center;">Fundamentals of IT</p> <p>Students learn the basics of the LPA system, opening software, the email system and lpa.itslearning.com as well as the importance of secure passwords, folder structures and common keyboard shortcuts.</p>	<p style="text-align: center;">Micro:Bit</p> <p>Students will use the 'blocks' editor to learn how to program the BBC Micro:Bits. Tasks include programming electronic dice, compasses and a pong style game.</p>	<p style="text-align: center;">Spreadsheets 2</p> <p>Students will develop more advanced spreadsheet skills such as using spreadsheet models to make predictions, use of conditional formatting, absolute cell referencing, VLOOKUPS and creating more complex charts.</p>
2	<p style="text-align: center;">eSafety</p> <p>Students learn how to stay safe online and legal/ethical issues related to the use of online content. They will learn about copyright, plagiarism, reporting inappropriate behaviour, privacy settings, identify theft and e-commerce.</p>	<p style="text-align: center;">Scratch</p> <p>Students will build on their KS2 Scratch coding knowledge. They will apply logical thinking to solving problems including developing their own flappy bird game and creating an interactive advent calendar.</p>	<p style="text-align: center;">Cyber Security Websites</p> <p>Students learn about aspects of computer security and how organisations can secure their essential data from theft, deletion and malicious editing. Their work will be presented in a website developed using Pingendo.</p>
3	<p style="text-align: center;">Spreadsheets 1</p> <p>'Harry Potter' unit where students learn various spreadsheet skills, including use of formulae, functions and creating charts to display data.</p>	<p style="text-align: center;">Future Technology Websites</p> <p>Students create websites using Serif WebPlus. They will develop their design skills and have an awareness of the features that go into making a professional looking website meeting the needs of audiences and end users.</p>	<p style="text-align: center;">Faking It (Image Manipulation)</p> <p>Students learn a variety of image editing techniques including removing blemishes, cut out studio, changing colours and editing layers and apply these skills to create a digital media graphic.</p>
4	<p style="text-align: center;">Algorithms 1</p> <p>Students will use the Flowol software to learn how algorithms are used in developing control systems. They will then create flow charts which model a variety of control systems.</p>	<p style="text-align: center;">Information, Reliability and Bias</p> <p>Should we believe everything we read online? In the era of 'fake news' this unit aims to teach students the importance of fact checking, identifying the reliability of websites and how to spot if a site may have a biased point of view.</p>	<p style="text-align: center;">Algorithms 2</p> <p>Building upon the unit studied in year 7 students will further their knowledge of Flowol to develop control systems using a variety of flow charts. They will control inputs and outputs and include the use of sub-routines and variables.</p>
5	<p style="text-align: center;">Computer Hardware</p> <p>Students learn about the key hardware components that are present within a computer system. They will discover how these components work alongside each other to carry out the core functions of the device.</p>	<p style="text-align: center;">Python (Loops and Lists)</p> <p>Students learn how to use the Python list object. Adding items, removing them, searching the list and linking lists together. Students also learn how to use Python to create files, edit and save changes to files.</p>	<p style="text-align: center;">Python (Drawing)</p> <p>This unit sees students further their Python skills developed during years 7 and 8 by creating code that will then use the 'turtle' pen feature to draw on an on screen canvas.</p>
6	<p style="text-align: center;">Introduction to Python</p> <p>Introduction to the Python programming language. Students will learn about inputs, outputs, variables, data types and write their own Python code to make a simple calculator.</p>	<p style="text-align: center;">Databases</p> <p>Students learn about database terminology including Fields, Records and Data Types. They create simple flat file database tables and develop queries to filter the data stored within the database.</p>	<p style="text-align: center;">Data Representation</p> <p>This unit will see students learn the binary number system, about ASCII characters and code breaking. They will also learn about bitmap images and how computers can represent sound.</p>