

LTP – KS3 Computing

The intent of the KS3 Computing curriculum is to provide every learner with the necessary ICT and computer science knowledge and skills to succeed personally, socially, and professionally in today's increasingly digital society. The KS3 Computing curriculum also aims to ensure all learners develop their creativity, resilience, problem-solving and critical thinking skills through the safe and responsible use of technology. Finally, the KS3 Computing curriculum provides plenty of opportunities to support learning across different subject areas and to promote SMSC and British values.

Year 7					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>File Management, Hardware & Software and Computer Networks</p> <ul style="list-style-type: none"> Managing files and folders Hardware and software Operating Systems Input and output devices LANs and WANs <p>Presenting Information (Presentation Software)</p> <ul style="list-style-type: none"> Use presentation software to present information about computer systems 	<p>E-Safety</p> <ul style="list-style-type: none"> Hacking Spamming Phishing Malware Cyberbullying <p>Presenting Information (DTP Software)</p> <ul style="list-style-type: none"> Use DTP software to present textual and graphic information about e-safety 	<p>Spreadsheets</p> <ul style="list-style-type: none"> Key elements of spreadsheets Rows and columns manipulation Cell formatting Data entry Using formulas Using common functions Analysing data and asking questions 	<p>Database Management Systems I</p> <ul style="list-style-type: none"> Database structure Setting data types Sorting data Data entry forms Creating simple queries Presenting data using reports 	<p>Visual Programming -Scratch I</p> <ul style="list-style-type: none"> Introduction to computer programming and algorithms Understanding algorithms Visual vs textual programming Scratch interface and basic tools Sequencing I Iterations I Selection I 	<p>Visual Programming -Scratch II</p> <ul style="list-style-type: none"> Sequencing II Iteration II Conditions II Planning and creating shapes, animations, and interactive stories in Scratch
Year 8					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Internal Computer Components</p> <ul style="list-style-type: none"> Input, output and storage devices Functions of motherboard, CPU, RAM, ROM, HDD/SSD, sound card, graphics card 	<p>Spreadsheets Modelling and Graphic Representation of Data</p> <ul style="list-style-type: none"> Using spreadsheets to solve problems Modelling real life scenarios Graphic representation of data 	<p>Database Management Systems II</p> <ul style="list-style-type: none"> Importing external data Setting data types Data entry forms Creating simple and complex queries Present data using reports Exporting data 	<p>Data Representation</p> <ul style="list-style-type: none"> Denary & binary Denary to binary Binary to denary Adding binary Adding binary and denary Representing text, images, and sound File compression 	<p>Computational Thinking - Scratch III</p> <ul style="list-style-type: none"> Computational thinking Decomposition Pattern recognition Abstraction Algorithmic Thinking Pseudocode Sequencing III Iterations III Conditions III 	<p>Visual Programming -Scratch IV</p> <ul style="list-style-type: none"> Iterations IV Conditions IV Variables Broadcasting messages Cloning Planning and creating and evaluating games in Scratch

Year 9

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Computer Networks -Internet and Communication</p> <ul style="list-style-type: none"> • The Internet • The WWW • Transferring information over the Internet • HTML • Email • VoIP and video conferencing 	<p>HTML & Web Design</p> <ul style="list-style-type: none"> • HTML • Basic Features of web authoring software • Planning a website • Using web authoring software to create a website which include tables, text, images and internal and external hyperlinks • Testing a website • Evaluating a website 	<p>Writing Algorithms: Pseudocode and Flowcharts – Flowol</p> <ul style="list-style-type: none"> • Pseudocode & Flowcharts • Writing algorithms using pseudocode • Writing algorithms using flowcharts • Introduction to control software • Using control software to control real models and robots 	<p>Textual Programming - Python I</p> <ul style="list-style-type: none"> • Data Types • Casting • String manipulation • Arithmetic, assignment, and comparison operators • Constant and variables 	<p>Textual Programming -Python II</p> <ul style="list-style-type: none"> • Mathematical operations • Boolean logic • Variables • Input functions • Lists • Tuples • Dictionaries • Planning and creating algorithms in Python to solve problems 	<p>Textual Programming -Python III</p> <ul style="list-style-type: none"> • Planning and creating programmes in Python to solve common everyday problems