



Programme of study - Computing

Synopsis

Y7 – 0 hours (due to Covid restrictions)

Y8 – 0 hours (due to Covid restrictions)

Y9 - 0 hours (due to Covid Restrictions)

Y10 Computer Science – 5 lessons every 2 weeks

Y10 Creative iMedia – 5 lessons every 2 weeks

Y11 Computer Science – 4 lessons every 2 weeks

Y11 Creative iMedia – 4 lessons every 2 weeks

KS3						
Year	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
7	E-Safety <ul style="list-style-type: none"> IT expectations and logging on Baseline test Cyber bullying Grooming Staying safe on social media Sexting EOU Test 	Small Basic <ul style="list-style-type: none"> Variables Simple shapes Selection Iteration Sequence EOU Test	Core IT Skills in Business <ul style="list-style-type: none"> Expectations, folder structures and Google Classroom Test Using Microsoft Word for logo creation 	IT and Data Skills in Business <ul style="list-style-type: none"> Creating a promotional event EOU Test Manipulating data in Microsoft Excel Advanced manipulation of 	Computational Thinking <ul style="list-style-type: none"> Introduction to computational thinking Decomposition / Abstraction Pattern recognition Algorithm Design Synoptic Test 	Micro:Bits <ul style="list-style-type: none"> Introduction to Micro:Bits Basic functions of Micro:Bits Advanced functions of Micro:Bits Micro:Bit sorting hat End of year test



Year	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
8	Python <ul style="list-style-type: none"> • Variables • Printing to the screen • Accepting user input • Selection • Iteration • EOU Test 	Data representation <ul style="list-style-type: none"> • Binary definition • Binary to denary conversion • Denary to binary conversion • Binary addition • Hexadecimal introduction • EOU Test 	Core IT Skills in Business <ul style="list-style-type: none"> • Expectations, folder structures and Google Classroom • Test • Using Microsoft Word for logo creation • Creating an advertisement in Microsoft Word • Creating promotional material in Microsoft Power Point 	IT and Data Skills in Business <ul style="list-style-type: none"> • Creating a promotional event • EOU Test • Manipulating data in Microsoft Excel • Advanced manipulation of data in Microsoft Excel. • Synoptic Test 	HTML and web design <ul style="list-style-type: none"> • Introduction to HTML • Create a page in HTML • Introduction to Serif Web Plus • Create a web site in Serif Web Plus • Synoptic Test 	Networks and Cryptology <ul style="list-style-type: none"> • Introduction to networks • Wired and wireless networks • Encryption • Vignere Cipher • Alan Turing and encryption WW2 • End of year test



9 Computing	Computational Thinking <ul style="list-style-type: none"> • Decomposition • Abstraction • Pattern recognition • Algorithm design • Debugging 	Python programming <ul style="list-style-type: none"> • Variables • Iteration • Selection • Subroutines • Functions • String manipulation 	Networks <ul style="list-style-type: none"> • Introduction to networks • LAN and WAN • Network hardware • P2P and Client server models • The history of the internet • How the internet works • Virtual networks • Topologies, Wifi and ethernet • IP addressing • The concept of layers • Packet switching • End of unit test 	Creative iMedia digital graphic production <ul style="list-style-type: none"> • Purposes of graphics • Analysing client briefs • Planning a project • Different kinds of pre-production documents 	Creating a digital graphic to a brief <ul style="list-style-type: none"> • Using graphic programs • Following pre-production documents • Completing a digital graphic for a client • Evaluating a digital graphic and project 	Programming project <ul style="list-style-type: none"> • Introduction to project • How to document code • Testing tables • Selection • Iteration • Subroutines • Functions • Python project task • End of year test



<p>10 Computer Science</p>	<p>Algorithms</p> <ul style="list-style-type: none"> • Decomposition • Abstraction • Pattern recognition • Algorithm design • Debugging 	<p>Programming Techniques</p> <ul style="list-style-type: none"> • Variables • Iteration • Selection • Subroutines • Functions • String manipulation 	<p>Networks</p> <ul style="list-style-type: none"> • Introduction to networks • LAN and WAN • Network hardware • P2P and Client server models • The history of the internet • How the internet works • Virtual networks • Topologies, Wifi and ethernet • IP addressing • The concept of layers • Packet switching <p>End of unit test</p>	<p>Network Security</p> <ul style="list-style-type: none"> • Encryption • Vignere cipher • Alan Turing and WW2 cryptology • Malware and types • Social engineering • Brute force and DDOS • SQL injection • Preventing threats • Python security • Synoptic test 	<p>Storage / Systems Software</p> <ul style="list-style-type: none"> • Flash memory • Removeable media • Magnetic storage • Systems software • Operating systems 	<p>NEA Programming</p> <ul style="list-style-type: none"> • Introduction to NEA style task • How to document code • Testing tables • Selection • Iteration • Subroutines • Functions • Python project task • End of year test
<p>10 Creative iMedia</p>	<p>Introduction to Creative iMedia</p> <ul style="list-style-type: none"> • Introduction to analysing digital images • The 5 purposes of digital graphics • Creating a mood board <p>Start of R082 project</p>	<p>R082 Coursework</p> <ul style="list-style-type: none"> • Complete L01 section of coursework. • Introduction to L02 of R082. • Creating a mood board • Creating a mind map • Creating a storyboard • Creating a workplan 	<p>R082 Coursework</p> <ul style="list-style-type: none"> • Complete L02 section of coursework • Create a digital graphic for L03. 	<p>R082 Coursework</p> <ul style="list-style-type: none"> • Complete L03 section of coursework • Introduction of L04 • Analyse project • Submit coursework 	<p>R085 Coursework</p> <ul style="list-style-type: none"> • Introduction to R085 • Complete section LO1 • Introduction to L02 of R082. • Creating a mood board • Creating a mind map • Creating a storyboard 	<p>R085 Coursework</p> <ul style="list-style-type: none"> • Introduction to LO3 • Create a website for LO3 • Complete website for LO3 • Complete end of year test



					<ul style="list-style-type: none"> Creating a workplan 	
11 Computer Science	NEA and 1.8 Ethical legal cultural issues <ul style="list-style-type: none"> Introduction to NEA Ethical issues in IT Cultural issues in IT Legal issues in IT Environmental issues in IT Synoptic test 	1.7 System software and 2.4 Computational Logic <ul style="list-style-type: none"> Operating system interfaces Utility software Memory management User and file management Computational logic 	1.1 Systems architecture / Mock revision <ul style="list-style-type: none"> Von neumann architecture Factors affecting CPU performance Fetch, decode, execute cycle Registers Mock revision 	1.2 Memory / 1.3 Storage <ul style="list-style-type: none"> Memory usage Different types of memory Secondary storage devices Synoptic Test 	2.2 Programming techniques / 2.3 Producing robust programs / 2.1 Algorithms <ul style="list-style-type: none"> Algorithms Translators and facilities of languages Algorithmic thinking Synoptic Test 	Revision / Exams
11 Creative iMedia	R082 Coursework <ul style="list-style-type: none"> Complete L03 section of coursework Introduction of L04 Analyse project Submit coursework 	R085 Coursework & R081 theory <ul style="list-style-type: none"> Introduction to LO1 Analysing website R081 theory Purposes of preproductions documents Health and safety Legislation 	R081 exam and R085 coursework <ul style="list-style-type: none"> Introduction to LO2 Creating a mood board Creating a mind map Creating a storyboard Creating a workplan 	R091 coursework <ul style="list-style-type: none"> Introduction to R091 and LO1 Analysing digital games Introduction to LO2 Creating a mood board Creating a mind map 	R091 coursework <ul style="list-style-type: none"> Continue with LO3 Introduction to LO4 Hand in R091 R081 theory Purposes of preproductions documents Health and safety Legislation 	Revision / Exams



			<ul style="list-style-type: none">• Introduction to LO3• LO4 hand in R085	<ul style="list-style-type: none">• Creating a storyboard• Creating a workplan• Introduction to LO3		
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