

Now that the revised curriculum has been taught, please consider the Implementation and Impact of the curriculum you taught.  
What changes might need to be made to the Curriculum Intent (See Curriculum Map and Overviews) in light of this year's experiences?

Year 11 Overview 2023-24 – Computer Science													
Date	Wk	Week	Units Studied & Learning Outcomes			Key Concepts & Assessment							
8 weeks ( 38 Days)													
Tues 5-Sep	A	1	<b>Unit 6 Outcomes</b> <table><thead><tr><th>Prior</th><th>Current</th><th>Next</th></tr></thead><tbody><tr><td>Year 9 KS3 NC – use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions</td><td>Year 10 KS4 NC – develop and apply their analytic, problem-solving, design, and computational thinking skills or functions</td><td>KS5 – Chapters 1 - 4 Learning to program effectively. Chapters 13 - 14 Planning and completing a programming project.</td></tr></tbody></table>			Prior	Current	Next	Year 9 KS3 NC – use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions	Year 10 KS4 NC – develop and apply their analytic, problem-solving, design, and computational thinking skills or functions	KS5 – Chapters 1 - 4 Learning to program effectively. Chapters 13 - 14 Planning and completing a programming project.	<b>Topic 6: Problem solving with programming.</b> <p>The main focus of this paper is:</p> <ul style="list-style-type: none"><li>understanding what algorithms are, what they are used for and how they work in relation to creating programs</li><li>understanding how to decompose and analyse problems</li><li>ability to read, write, refine and evaluate programs.</li></ul> <p>Define the term ‘program’</p> <p>Identify types of programs used every day</p> <p>Identify Python as a programming language</p> <p>Access an integrated development environment</p> <p>Load and run a Python program</p> <p>Change a Python program</p> <p>Save a Python program</p> <p>Use arithmetic operators and BIDMAS</p> <p>Layout code to be readable and maintainable</p> <p>Correct errors in programs</p> <p>Use variables in algorithms and programs</p> <p>Define the term ‘decomposition’</p> <p>Define the term ‘algorithm’</p> <p>Decompose a problem</p> <p>Order the pieces of an algorithm (unplugged)</p> <p>Order the pieces of an algorithm (IDE)</p> <p>Define the term ‘sequence’ and use sequence in algorithms and program code</p> <p>Interpret error messages</p> <p>Correct errors in ordering</p> <p><b>Links to history, culture, vocabulary:</b></p> <p>Computer programming history - Ada Lovelace is credited as being the first person to describe or write a computer program. In 1843, she described an algorithm to compute Bernoulli numbers using the Analytical Engine. For more see: <a href="https://www.computerhope.com/history/programming.htm">https://www.computerhope.com/history/programming.htm</a></p> <p>Program – noun</p> <p>a series of coded software instructions to control the operation of a computer or other machine.</p> <p>Programming - noun</p> <p>the process or activity of writing computer programs.</p> <p>Careers: Software application developer, Web developer, Computer systems engineer, Database administrator, Computer systems analyst, Software quality assurance (QA) engineer, Business intelligence analyst, Computer programmer, Network system administrator.</p> <p><b>PAPER 2 Preparation</b></p> <p><b>Equality Diversity and Inclusion (EDI)</b></p> <p>15/09-17/09 Rosh Hashanah</p> <p>23/9 International day of sign languages</p> <p>2/10-8/10 Dyslexia awareness week</p> <p>5/10 world teachers day</p> <p>6/10 World cerebral palsy day</p>	
Prior	Current	Next											
Year 9 KS3 NC – use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions	Year 10 KS4 NC – develop and apply their analytic, problem-solving, design, and computational thinking skills or functions	KS5 – Chapters 1 - 4 Learning to program effectively. Chapters 13 - 14 Planning and completing a programming project.											
11-Sep	B	2											
18-Sep*	A	3											
25-Sep	B	4											
2-Oct	A	5											
9-Oct	B	6											
16-Oct	A	ST1											
23-Oct	B	ST1											
7 weeks (34 Days)													
Half-Term			7 weeks (34 Days)										
6-Nov	A	ST1	<b>Unit 2 Outcomes</b> <table><thead><tr><th>Prior</th><th>Current</th><th>Next</th></tr></thead></table>			Prior	Current	Next	<b>ALL TOPICS RECOVER AND REVISION</b> <p>Topic 2: Data – understanding of binary, data representation, data storage and compression.</p> <p>Define what is meant by the terms ‘binary’ and ‘bit’</p> <p>Explain why binary is used to represent data and program instructions in a computer</p>				
Prior	Current	Next											
13-Nov	B	10											
20-Nov	A	11											
27-Nov	B	12											

4-Dec	A	13	Year 9 KS3 NC – understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal]	Year 10 KS4 NC – develop and apply their analytic, problem-solving, design, and computational thinking skills	KS5 – Chapters 5 - 12 Foundations of Computer Science.	Describe the relationship between the number of available bits and the range of unique values that can be represented Determine the number of unique values that can be represented by a binary pattern of a given length (2^n) Define what is meant by the terms ‘nibble’ and ‘byte’ Convert between denary and 8-bit binary numbers  <b>Topic 1: Computational thinking</b> – understanding of what algorithms are, what they are used for and how they work; ability to follow, amend and write algorithms; ability to construct truth tables.  <b>Equality Diversity and Inclusion (EDI)</b> 12/11 Diwali 12/11 Remembrance Sunday 13/11-19/11 Transgender awareness week 14/11 World Diabetes Day 1/12 World AIDS day 3/12-24-12 Advent 25/12 Christmas Day Hannukah 18/12-26/12									
11-Dec	B	14													
18-Dec															
	A	15													
Christmas Holiday 6 weeks (30 Days)															
8-Jan	B	16	<b>Unit 3 Outcomes</b> <table><tr><th>Prior</th><th>Current</th><th>Next</th></tr><tr><td>Year 9 KS3 NC – understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits</td><td>Year 10 KS4 NC – develop and apply their analytic, problem-solving, design, and computational thinking skills</td><td>KS5 NC – Chapters 5 - 12 Foundations of Computer Science.</td></tr></table>			Prior	Current	Next	Year 9 KS3 NC – understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits	Year 10 KS4 NC – develop and apply their analytic, problem-solving, design, and computational thinking skills	KS5 NC – Chapters 5 - 12 Foundations of Computer Science.	<b>ALL TOPICS RECOVER AND REVISION</b>  Topic 3: Computers – understanding of hardware and software components of computer systems and characteristics of programming languages.  Describe the role of the operating system in a computer system Identify tasks carried out by an OS Describe how the OS organises files and allocates space on a hard drive Construct an expression to calculate the number of blocks of space on a hard drive needed to store a file of a given size Describe how file permissions are used to control access to files Select an appropriate level of file access (read, write, delete, none) for a user Describe how an OS uses scheduling to give each active process a share of CPU time Describe the features of the round-robin scheduling algorithm Describe how the OS uses a paging algorithm to swap programs in and out of main memory. Define what is meant by the term ‘peripheral’ Describe how the OS uses drivers to communicate with and manage peripherals Explain the purpose of a user interface and describe features of a user interface Define what is meant by the term ‘access control’ Describe commonly used methods of authentication Select suitable access right for specified individuals  <b>Equality Diversity and Inclusion (EDI)</b> 25/1 Burns night 27/1 Holocaust memorial day LGBT+ history month 1/2 World Hijab day 6/2-12/2 Children's mental health week.			
Prior	Current	Next													
Year 9 KS3 NC – understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits	Year 10 KS4 NC – develop and apply their analytic, problem-solving, design, and computational thinking skills	KS5 NC – Chapters 5 - 12 Foundations of Computer Science.													
15-Jan	A	17													
22-Jan	B	18													
29-Jan	A	ST2													
5-Feb	B	ST2													
12-Feb	A	ST2													

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				7/2 Safer internet day 10/2 Chinese New Year
Half-Term			5 weeks (24 Days)	
26-Feb	B	22	ALL TOPICS RECOVER AND REVISION	ALL TOPICS RECOVER AND REVISION
4-Mar	A	23		
11-Mar	B	24		
18-Mar	A	25		
25-Mar*				
	B	26		
Easter Holiday			6 weeks (29 Days)	
15-Apr	A	27	Unit 5	Topic 5: Issues and impact – awareness of emerging trends in computing technologies, and the impact of computing on individuals, society and the environment, including ethical, legal and ownership issues.
22-Apr	B	28		
29-Apr	A	29		
6-May*		30		
	B			

			identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns	and how to identify and report a range of concerns.		Data Protection Act (1998) Computer Misuse Act (1990)Waste Electrical and Electronic Equipment recycling (WEEE)  <b>Equality Diversity and Inclusion (EDI)</b> <i>Autism and stress awareness month.</i> <i>25/4 World Malaria Day</i> <i>26/4 Lesbian visibility day</i> <i>UK national walking month.</i> <i>1/5-7/5 Deaf awareness week</i> <i>23/05 Vesak</i>
13-May	A	GCSE				
20-May	B	GCSE				
Half-Term7 weeks (35 Days)						
3-Jun	A	GCSE	<b>Equality Diversity and Inclusion (EDI)</b> <i>LGBTQ+ pride month.</i> <i>Gypsy, Roma and Traveller history month.</i> <i>12/6 world day against child labour</i> <i>18/6 autistic pride day</i> <i>20/6 World refugee day</i>			
10-Jun	B	GCSE				
17-Jun	A	GCSE				
24-Jun	B	Contin gency				
(Total: 190 Days)						

\* Bank Holidays

Overview of Year 11	
Based on your Flight Path	By the end of Year 11, students will have learned
<b>GW:</b>	understanding what algorithms are, what they are used for and how they work in relation to creating programs; be able to write programs that use pre-existing (built-in, library) and user-devised subprograms (procedures, functions); be able to write programs that make appropriate use of variables and constants; be able to use decomposition and abstraction to analyse, understand and solve problems
<b>BI:</b>	understanding how to decompose and analyse problems ; be able to write functions that may or may not take parameters but must return values, and procedures that may or may not take parameters but do not return values; be able to write programs that make appropriate use of primitive data types (integer, real, Boolean, char) and oneand two-dimensional structured data types (string, array, record); be able to identify, locate and correct program errors (logic, syntax, runtime)
<b>EW:</b>	ability to read, write, refine and evaluate programs; be able to use logical reasoning and test data to evaluate a program's fitness for purpose and efficiency (number of compares, number of passes through a loop, use of memory); understand the difference between and be able to write programs that make appropriate use of global and local variables; be able to write programs that manipulate strings (length, position, substrings, case conversion); be able to use logical reasoning and test data to evaluate a program's fitness for purpose and efficiency (number of compares, number of passes through a loop, use of memory)