

Progression map: breaks down the key concepts to specify the most important knowledge and how that knowledge builds within the curriculum.

| Key Concepts | <u>Year 7</u> | <u>Year 8</u> | <u>Year 9</u> | <u>Year 10 CS</u> | <u>Year 11 CS</u> | Year 12 Cam Tech | Year 13 Cam Tech |
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| Problem Solving | HT2 -Networks; from semaphores to internet HT3 -Using Media HT4/5 -Scratch | HT1 - Vector Graphics HT3 -Edublocks HT4 - Representations HT5 -Mobile app development HT6 -Lego | HT1 -Python programming HT5 -Data Science HT4 -Going Audiovisual HT3 -AI HT6 -Physical computing | T1 - Practical Programming T3 - Algorithms T3 - Programming Project | T1-Logic & Languages T1-Programming fundamentals T2-Programming project T3-Revision | T1-Fundamentals of ICT T2-Unit 2 Global information systems T3-Unit 6 App design | T1-Unit 6 App design T2-Unit 13 Social Media & Digital Marketing |
| Algorithms | HT4/5 -Scratch HT6 -Spreadsheets | HT2 -Layers of Computing systems HT3 -Edublocks HT6 -Lego | HT1 -Python programming HT5 -Data Science HT6 -Physical computing | T1 - Practical Programming T3 - Algorithms T3-Programming project | T1-Programming fundamentals T2-Programming project T3-Revision | | T3-Unit 17 Internet of Everything |
| Mathematical Concepts & Logic | HT4/5 -Scratch HT6 -Spreadsheets | HT1 - Vector Graphics HT2 -Layers of Computing systems HT3 -Edublocks HT4 - Representations HT6 -Lego | HT1 -Python programming HT5 -Data Science HT4 -Going Audiovisual HT6 -Physical computing | T1-Memory & Storage T1 - Data Representation T1-Network connections & protocols T2- Network security & systems software T3-Algorithms T3 - Programming Project | T1-Logic & Languages T1-Programming fundamentals T2-Programming project T3-Revision | | |
| Machines & Software | HT1 -Clear messaging in digital media | HT1 - Vector Graphics HT2 -Layers of Computing systems | HT1 -Python programming HT2 -Media Animations | T1-Systems architecture T1-Memory & Storage | T1-Logic & Languages T1-Programming fundamentals | T1-Unit 1 Fundamentals of ICT | T1-Unit 6 App design |

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| | HT2 -Networks; from semaphores to internet HT4/5 -Scratch HT6 -Spreadsheets | HT4 - Representations HT5 -Mobile app development HT6 -Lego | HT5 -Data Science HT4 -Going Audiovisual HT3 -AI HT6 -Physical computing | T1- Network connections and protocols T2- Network security & systems software T3-Revision | T2-Programming project T3-Revision | T2-Unit 2 Global information systems T3-Unit 6 App design | |
| Communication & Coordination | HT1 -Clear messaging in digital media HT2 -Networks; from semaphores to internet HT3 -Using Media HT4/5 -Scratch | HT2 -Layers of Computing systems HT3 -Edublocks HT4 - Representations HT5 -Mobile app development HT6 -Lego | HT2 -Media Animations HT5 -Data Science HT4 -Going Audiovisual HT3 -AI HT6 -Physical computing | T1-Systems architecture T1 Memory & storage T1 - Network connections and protocols T2 - Network Security & Systems Software T2 - Impacts of digital technology T3-Revision | T1-Logic & Languages T1-Programming fundamentals T2-Programming project T3-Revision | T1-Unit 1 Fundamentals of ICT T2-Unit 2 Global information systems T3-Unit 6 App design | T1-Unit 6 App design T2-Unit 13 Social Media & Digital Marketing T3-Unit 17 Internet of Everything |
| Digital Literacy | HT1 -Clear messaging in digital media HT2 -Networks; from semaphores to internet HT3 -Using Media HT6 -Spreadsheets | HT1 - Vector Graphics HT4 - Representations HT5 -Mobile app development | HT1 -Python programming HT2 -Media Animations HT4 -Going Audiovisual HT3 -AI | T2 - Network Security T2 - Systems Software T2 - Impacts of digital technology T3-Revision | T3-Revision | T1-Unit 1 Fundamentals of ICT T2-Global information systems T3-Unit 6 App design | T1-Unit 6 App design T2-Unit 13 Social Media & Digital Marketing T3-Unit 17 Internet of Everything |

Long-term plan: organises the knowledge from the progression map into units to give an overview of what is taught when in the curriculum.

| Year 7 | | | | | | | | | | | |
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| Autumn Term 1 | | Autumn Term 2 | | Spring Term 1 | | Spring Term 2 | | Summer Term 1 | | Summer Term 2 | |
| Unit Title: Clear messaging in digital media | Unit length: 6x1hr | Unit Title: Networks; from semaphores to internet | Unit length: 6x1hr | Unit Title: Using Media | Unit length: 6x1hr | Unit Title: Intro to Scratch | Unit length: 6x1hr | Unit Title: Scratch II | Unit length: 6x1hr | Unit Title: Modelling data using spreadsheets | Unit length: 6x1h |
| Domains of Knowledge: <ul style="list-style-type: none"> E-safety Hardware Digital Literacy The bigger picture | | Domains of Knowledge: <ul style="list-style-type: none"> Problem solving Hardware Networks | | Domains of Knowledge: <ul style="list-style-type: none"> Digital Literacy The bigger picture Problem solving E-safety | | Domains of Knowledge: <ul style="list-style-type: none"> Algorithms Programming constructs Problem solving | | Domains of Knowledge: <ul style="list-style-type: none"> Algorithms Programming constructs Problem solving | | Domains of Knowledge: <ul style="list-style-type: none"> Algorithms Programming constructs Problem solving The bigger picture | |
| Key Concepts: <ul style="list-style-type: none"> Digital literacy Machines & Software Communication & Coordination | | Key Concepts: <ul style="list-style-type: none"> Problem Solving Machines & Software Communication & Coordination Digital literacy | | Key Concepts: <ul style="list-style-type: none"> Problem Solving Communication & Coordination Digital Literacy | | Key Concepts: <ul style="list-style-type: none"> Problem solving Communication & Coordination Mathematical concepts & logic | | Key Concepts: <ul style="list-style-type: none"> Problem solving Communication & Coordination Mathematical concepts & logics | | Key Concepts: <ul style="list-style-type: none"> Algorithms Mathematical Concepts & Logic Machines & Software Digital literacy | |
| Gateway knowledge <ul style="list-style-type: none"> Use of a computer Use of basic office/G Suite package Can use software to design and make Understanding of E-safety | | Gateway knowledge <ul style="list-style-type: none"> Understand what a network is Can explain how data and peripherals are shared and give examples Know that there are different types of networks. | | Gateway knowledge: <ul style="list-style-type: none"> Have used the internet Awareness of legal issues surrounding use of technology Ability to use utility software | | Gateway knowledge: <ul style="list-style-type: none"> Experience of block programming Have played simple games such as Snake, Pong Experience of PRIMM (Predict, run, investigate, modify, make.) | | Gateway knowledge: <ul style="list-style-type: none"> Use of selection, repetition, variables and various forms of input and output Use of logical reasoning to explain simple algorithms | | Gateway knowledge: <ul style="list-style-type: none"> Know what a spreadsheet is Awareness that a spreadsheet can hold data and do calculations. | |
| Assessment end-points: <ul style="list-style-type: none"> Use Google classroom effectively | | Assessment end-points: <ul style="list-style-type: none"> Summative assessment demonstrating | | Assessment end-points: <ul style="list-style-type: none"> Create a blog that demonstrates an understanding of | | Assessment end-points: <ul style="list-style-type: none"> Understand what makes a good and bad game | | Assessment end-points: <ul style="list-style-type: none"> Define algorithm, iteration, selection, | | Assessment end-points: <ul style="list-style-type: none"> Summative assessment that demonstrates knowledge and | |

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| <ul style="list-style-type: none"> ● Create and use a word processed document, a slideshow and email showing understanding of Gsuite. ● Demonstrate how to use the internet safely and effectively to search for information | <p>knowledge of different types of network and how they communicate.</p> | <p>legislation and copyright</p> <ul style="list-style-type: none"> ● Summative quiz | <ul style="list-style-type: none"> ● Understand and demonstrate inputs/outputs, processing and variables. ● Create a simple program making use of loops, sequence, selection and iteration | <p>abstraction & decomposition.</p> <ul style="list-style-type: none"> ● Solve problems using abstraction and pattern recognition ● Create solutions to problems using computational thinking. | <p>application of the following:</p> <ul style="list-style-type: none"> ● Sort & Filter ● Data analysis ● Chart production ● Simple SQL |
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| Year 8 | | | | | | | | | | | |
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| Autumn Term 1 | | Autumn Term 2 | | Spring Term 1 | | Spring Term 2 | | Summer Term 1 | | Summer Term 2 | |
| Unit Title: Vector Graphics | Unit length: 6x 1hr | Unit Title: Layers in computing systems | Unit Length: 6x1hr | Unit Title: EduBlocks | Unit length: 6x 1hr | Unit Title: Representations | Unit length: 6x 1hr | Unit Title: Mobile App Development | Unit length: 6x 1hr | Unit Title: Lego-RAF | Unit length: 6x 1hr |
| <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Data representation ● Problem solving ● The bigger picture | | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Networks ● Hardware ● Testing & debugging ● The Bigger Picture | | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Algorithms, ● Testing & Debugging, ● Problem solving, ● Programming constructs | | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Data representation ● Testing & debugging ● Problem solving | | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Algorithms, ● Testing & debugging ● Problem solving ● The bigger picture ● Digital Literacy | | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Networks ● The bigger picture ● Hardware ● Digital literacy | |
| <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Problem solving, ● Mathematical concepts, ● Machines & Software | | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Algorithms ● Mathematical concepts & Logic ● Machines & Software | | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Problem solving, ● Mathematical concepts, ● Algorithms | | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Communication & Coordination ● Machines & Software ● Problem Solving | | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Communication & Coordination ● Machines & Software ● Problem Solving | | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Mathematical concepts & Logic ● Communication & Coordination | |

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| <ul style="list-style-type: none"> Digital literacy | <ul style="list-style-type: none"> Communication & Coordination | | | <ul style="list-style-type: none"> Digital Literacy | <ul style="list-style-type: none"> Machines & Software Digital literacy |
| <p>Gateway knowledge:</p> <ul style="list-style-type: none"> Use of basic design programs How logos can be linked to a brand What makes a good logo | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> Understanding of the evolution of computers Awareness of NOT, AND & OR. Knowledge of AI and how it is changing the world of work. | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> Basic block programming Use of PRIMM Simple flowchart | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> Understanding that there are different types of file. Understand that computers use different languages. Understanding of binary | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> Can decompose a problem Have used apps before Can identify what makes a good/bad app | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> Have used lego before Have used basic block coding Know how to move a robot using blocks Understanding of algorithms Map reading |
| <p>Assessment end-points:</p> <ul style="list-style-type: none"> Designing a vector graphic to a brief demonstrating manipulation of the vector graphic Summative assessment, testing knowledge and understanding of manipulation of graphics. | <p>Assessment end-points:</p> <ul style="list-style-type: none"> Formative assessment at the end of each lesson based on the knowledge acquisition Summative assessment testing understanding of computer systems | <p>Assessment end-points:</p> <ul style="list-style-type: none"> Program a turtle Understand how to create patterns Use logic to identify steps to achieve a goal. Visualise flowcharts through programming. | <p>Assessment end-points:</p> <ul style="list-style-type: none"> Summative assessment quiz Puzzle activity that challenges learners to unchain Alan Turing's mug. | <p>Assessment end-points:</p> <ul style="list-style-type: none"> Create an app that fulfils a brief Summative assessment to demonstrate knowledge and understanding of; <ul style="list-style-type: none"> Event handling Sequencing Variables Selection Operators | <p>Assessment end-points:</p> <ul style="list-style-type: none"> Programs that solve problems Block coded program Python coded program |

| Autumn Term 1 | | Autumn Term 2 | | Spring Term 1 | | Spring Term 2 | | Summer Term 1 | | Summer Term 2 | |
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| Unit Title: Python Programming with Sequences of Data | Unit length: 6x 1hr | Unit Title: Animations | Unit length: 6x 1hr | Unit Title: AI | Unit length: 6x 1hr | Unit Title: Data Science | Unit length: 6x 1hr | Unit Title: Representations-Going Audiovisual | Unit length: 6x 1hr | Unit Title: Micro:Bits | Unit length: 6x 1hr |
| Domains of Knowledge: <ul style="list-style-type: none"> Algorithms, Testing & debugging Problem solving The bigger picture Digital Literacy | | Domains of Knowledge: <ul style="list-style-type: none"> The bigger picture Digital literacy Hardware Data representation | | Domains of Knowledge: <ul style="list-style-type: none"> Data representation The bigger picture Digital literacy | | Domains of Knowledge: <ul style="list-style-type: none"> Problem solving, Programming constructs Data representation The bigger picture | | Domains of Knowledge: <ul style="list-style-type: none"> Hardware Data representation The bigger picture Problem Solving Digital literacy Algorithms | | Domains of Knowledge: <ul style="list-style-type: none"> Programming constructs Testing & debugging Problem solving Algorithms Data representation | |
| Key Concepts: <ul style="list-style-type: none"> Communication & Coordination Machines & Software Problem Solving Digital Literacy Mathematical Concepts & Logic | | Key Concepts: <ul style="list-style-type: none"> Machines & Software Communication & Coordination Digital Literacy | | Key Concepts: <ul style="list-style-type: none"> Problem Solving Machines & Software Communication & Coordination Digital Literacy | | Key Concepts: <ul style="list-style-type: none"> Machines & Software Digital Literacy Mathematical concepts & Logic Problem Solving | | Key Concepts: <ul style="list-style-type: none"> Mathematical concepts & Logic Problem Solving Communication & Coordination Digital literacy Machines & Software | | Key Concepts: <ul style="list-style-type: none"> Algorithms Mathematical concepts & logic Problem Solving | |
| Gateway knowledge: <ul style="list-style-type: none"> Basic programming skills Awareness of sequences Ability to follow a flowchart | | Gateway Knowledge: <ul style="list-style-type: none"> Some experience of using graphics Awareness of how to make videos and use camera technology | | Gateway Knowledge: <ul style="list-style-type: none"> Awareness of hacking Knowledge of e-safety and how to protect themselves on the internet Understand what AI is and what impact it can have. | | Gateway Knowledge: <ul style="list-style-type: none"> Understand that data needs context Have experience of data through reports | | Gateway knowledge: <ul style="list-style-type: none"> Use of office suite/google suite to create work Ability to select the correct software for a specific task Knowledge of basic programs on a computer. Understanding of how data can be represented | | Gateway knowledge: <ul style="list-style-type: none"> Understand what an algorithm is Understand sequencing Understand binary Have used block/Python coding before Awareness of routines (iteration) and selection | |

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| <p>Assessment end-points:</p> <ul style="list-style-type: none"> Each lesson includes a set of worksheets that can be used for formative assessment. Completed project using programming techniques Summative quiz testing knowledge and understanding; | <p>Assessment end-points:</p> <p>Creating an animation that makes use of the following:</p> <ul style="list-style-type: none"> Modelling Colours Animation Lighting Camera | <p>Assessment end-points:</p> <p>Summative assessment which tests the learners knowledge of the following:</p> <ul style="list-style-type: none"> Social and ethical implications of AI Data driven and rule based approaches How to use machine learning Evaluation of ML. | <p>Assessment end-points:</p> <ul style="list-style-type: none"> Summative assessment that requires learners to read and interpret data, demonstrating the newly acquired skills and knowledge gleaned in the unit. | <p>Assessment end-points:</p> <ul style="list-style-type: none"> Understand and breakdown the roles of the Operating System and their use of utilities. Classify types of software, and how they can be used effectively Understand what a digital footprint is, and how it can impact people. Use software appropriately to complete a specified task. | <p>Assessment end-points:</p> <ul style="list-style-type: none"> Demonstrate sequencing Program a Micro:bit to perform various tasks Design own programs Use and define protocols |
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| Year 10 Computer Science | | | | | | | | | | | |
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| Autumn Term 1 | | Autumn Term 2 | | Spring Term 1 | | Spring Term 2 | | Summer Term 1 | | Summer Term 2 | |
| Unit Title: 1.1 Systems Architecture | Unit length: 10 x 1hr 11x 1hr | Unit Title: 1.2 Memory & Storage | Unit length: 12 x 1hr 11x1hr | Unit Title: 1.3 Network connections & Protocol | Unit length: 8x1hr 7x1hr 10x1hr | Unit Title: 1.5 Systems Software | Unit length: 5 x 1hr 10 x 1hr | Unit Title: 1.6 Impact of digital technology | Unit length: 8 x 1hr | Unit Title: Programming Project | Unit length: 22 x 1hr |
| Practical Programming | | Practical Programming | | 1.4 Network Security | | Practical Programming | | Revision | | | |

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| <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Problem solving ● Programming constructs ● Hardware ● The bigger picture | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Networks ● Hardware ● Digital literacy ● Data representation | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Networks ● Hardware ● The bigger picture | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Digital literacy ● The bigger picture ● E-safety | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Problem solving ● Programming constructs ● Data representation ● Algorithms ● Testing & Debugging | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Problem solving ● Programming constructs ● Hardware ● Networks ● Algorithms ● Digital literacy ● The bigger picture ● Testing & Debugging |
| <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Algorithms ● Communication & Coordination ● Machines & hardware ● Mathematical concepts & logic | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Mathematical Concepts & Logic ● Communication & Coordination ● Machines & software | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Mathematical Concepts & Logic ● Machines & Software ● Communication & Coordination | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Digital literacy ● Communication & Coordination ● Machines & Software | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Algorithms ● Mathematical concepts & logic ● Problem Solving | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Problem solving ● Algorithms ● Mathematical concepts & logic ● Machines & software ● Communication & coordination ● Digital literacy |
| <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● How a computer works ● What's inside a computer ● Different storage types ● Calculating sizes of sound, image and text files ● Have created simple programs that make use of iteration and boolean expressions ● Understand what pseudocode is | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Understanding of how computers connect to the internet and other computers ● Knowledge of routers, wireless and wired networks ● Understanding how computers use binary and how to convert from denary ● Awareness of ASCII ● Use of different file types and how they are stored. | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Awareness of cyber crime ● Understanding of drivers, encryption, and memory | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Understanding of environmental impact of technology ● Awareness of data protection | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Understand abstraction and decomposition ● Can create a flowchart ● Can complete a bubble sort ● Have experience of computational thinking | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Experience of text based programming ● Can use algorithms to break down problems ● Can make use of pseudocode ● Can work to a given brief ● Can problem solve independently |

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| <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Understand the Von Neumann architecture ● Explain different types of storage including virtual memory ● Understand the difference between RAM & ROM ● Use pseudocode to plan programs ● Understand the concept of subroutines ● Understand and use basic file handling operations: Open, Read, Write, Close ● Write programs that use boolean expressions and iteration ● Understand what SQL is. | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Explain how to sample and store sound ● Understand compression in relation to images and sound and the effect on the file ● Understand the term character set ● Define bit, byte, kilobyte, megabyte, gigabyte ● Explain the TCP/IP protocol stack ● Understand the difference between a LAN & WAN ● Explain different topologies ● Understand WAP, MAC, IP and encryption ● Describe the uses of communications protocols including: FTP, POP, IMAP, SMTP ● Explain the use of Ethernet standards to transmit data over a wired network | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Explain the different functions of an operating system ● Identify and understand the prevention of vulnerabilities ● Describe the purpose and functionality of common utility software | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Describe legislation relevant to Computer Science ● Explain the impact of digital technology regarding legal issues and privacy issues ● Understand the impacts of digital technology on the wider society including ethical issues, cultural issues and environmental issues | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Understand different types of search ● Understand arithmetic operators ● Understand principles of computational thinking ● Be able to apply an algorithm to a data set ● Create and use trace tables ● Write algorithms in pseudocode using selection, iteration and sequence. | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Create a working program using Python ● Understand and use data types ● Declare and use variables ● Understand subroutines ● Use random number generation ● Use arithmetic operators in programming |
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| Year 11 Computer Science | | | | | | | |
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| Autumn Term 1 | | Autumn Term 2 | | Spring Term 1 | | Summer Term | |
| Unit Title: Logic & Languages | Unit length: 17 x 1hr | Unit Title: Programming fundamentals | Unit length: 20 x 1hr | Unit Title: NEA Programming project | Unit length: 20 x 1hr | Unit Title: REVISION | Unit length: 20 x 1hr |
| Domains of Knowledge: <ul style="list-style-type: none"> ● Problem solving ● Programming constructs ● Hardware ● The bigger picture ● Testing & Debugging | | Domains of Knowledge: <ul style="list-style-type: none"> ● Problem solving ● Programming constructs ● Hardware ● The bigger picture ● Testing & Debugging | | Domains of Knowledge: <ul style="list-style-type: none"> ● Problem solving ● Programming constructs ● Hardware ● The bigger picture ● Testing & Debugging | | Domains of Knowledge: <ul style="list-style-type: none"> ● Problem solving ● Programming constructs ● Hardware ● Networks ● Algorithms ● Digital literacy ● The bigger picture ● Testing & Debugging | |
| Key Concepts: <ul style="list-style-type: none"> ● Mathematical concepts & logic ● Problem Solving ● Communication & Coordination ● Machines & Software | | Key Concepts: <ul style="list-style-type: none"> ● Algorithms ● Mathematical concepts & logic ● Problem Solving ● Communication & Coordination ● Machines & Software | | Key Concepts: <ul style="list-style-type: none"> ● Algorithms ● Mathematical concepts & logic ● Problem Solving ● Communication & Coordination ● Machines & Software | | Key Concepts: <ul style="list-style-type: none"> ● Problem solving ● Algorithms ● Mathematical concepts & logic ● Machines & software ● Communication & coordination ● Digital literacy | |
| Gateway knowledge: <ul style="list-style-type: none"> ● Understand Boolean logic ● Understand how to test a program (PRIMM) ● Have an awareness of different computer languages ● Have experience of truth tables | | Gateway knowledge: <ul style="list-style-type: none"> ● Use of techniques in high level language such as Python ● Recognise and use different arithmetic and boolean operators ● Use of data types in programs/ scenarios ● Use of string manipulation and file handling operations in programs ● Use of arrays, functions and procedures in programs | | Gateway knowledge: <ul style="list-style-type: none"> ● Experience of programming to a brief ● Ability to independently problem solve ● To bread down problems using algorithms ● Test & debug effectively ● Work within a time frame | | Gateway knowledge: <ul style="list-style-type: none"> ● Experience of all parts of paper ● Understand how to answer an exam ● Time management skills | |
| Assessment end-points: <ul style="list-style-type: none"> ● Construct truth tables for AND, NOT, OR ● Understand how to make maintainable programs | | Assessment end-points: <ul style="list-style-type: none"> ● Understand and use data types: integer, real, Boolean, character and string | | Assessment end-points: <ul style="list-style-type: none"> ● Functioning program that fulfils a brief ● Evidence of testing & debugging of program | | Assessment end-points: <ul style="list-style-type: none"> ● GCSE exam 2 papers, 1hr 30 min each | |

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| <ul style="list-style-type: none"> ● Create, modify & interpret simple logic diagrams ● Understand the purpose of testing | <ul style="list-style-type: none"> ● Declare and use constants and variables ● Use input, output and assignment statements ● Use arithmetic operators including MOD and DIV ● Use string handling and conversion functions | <ul style="list-style-type: none"> ● Evidence of planning for a finished program | |
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| Year 12 Cam Tech | | | | | |
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| Autumn Term | | Spring Term | | Summer Term | |
| Unit Title: Unit 1 Fundamentals of IT LO1 LO2 LO3 LO4 LO5 | Unit length: 30 x 1hr | Unit Title: <u>Unit 2 Global Information</u> LO1 LO2 LO3 LO4 LO5 LO6 | Unit length: 30 x 1hr | Unit Title: Unit 17 Internet of Everything | Unit length: 30 x 1hr |
| Domains of Knowledge: <ul style="list-style-type: none"> ● Computer hardware ● Computer software ● Business IT Systems ● Employability & Communication | | Domains of Knowledge: <ul style="list-style-type: none"> ● Storage & sharing of global information ● Styles, classification and the management of global information ● Use of global information and the benefits to individuals and organisations ● Legal and regulatory framework governing the storage and use of global information | | Domains of Knowledge: <ul style="list-style-type: none"> ● The IOE ● Negatives and positives of the IOE ● The 4 pillars of the IOE ● Designing a product to use the IOE | |
| Key Concepts: <ul style="list-style-type: none"> ● Digital Literacy ● Problem Solving ● Communication & Coordination ● Machines & Software | | Key Concepts: <ul style="list-style-type: none"> ● Digital Literacy ● Problem Solving ● Communication & Coordination ● Machines & Software | | <ul style="list-style-type: none"> ● Digital Literacy ● Problem Solving ● Communication & Coordination ● Machines & Software | |
| Gateway knowledge: <ul style="list-style-type: none"> ● Experience of using a computer for work | | Gateway knowledge: <ul style="list-style-type: none"> ● Awareness of GDPR & Data protection laws | | Gateway knowledge: <ul style="list-style-type: none"> ● Use of a variety of IOT devices | |

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| <ul style="list-style-type: none"> ● Ability to differentiate hardware & software ● Use of a variety of software packages ● Awareness of how IT is used in business. | <ul style="list-style-type: none"> ● Experience of sharing information with others. ● Understanding of how holding data helps business & organisations | <ul style="list-style-type: none"> ● Awareness of how things are interconnected ● Understanding of application of IOE ● Ability to work to a brief |
| <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Terminal assessment Unit 1 Exam-1 hr 30 mins 25% of final grade taken in Jan of yr12 (resit opportunity in Summer of yr12) <p>Mandatory unit</p> | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Terminal assessment Unit 2 Exam-1 hr 30 mins 25% of final grade taken in Jan of yr12 (resit opportunity in Summer of yr12)Exam uses pre-release material. <p>Mandatory unit</p> | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Internally assessed coursework in response to a brief. Externally moderated. Completion by end of yr12. 17% of final grade- <p>Mandatory unit.</p> |

| Year 13 Cam Tech | | | | | |
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| Autumn Term 1 | Autumn Term 2 | Spring Term 1 | Spring Term 2 | Summer Term 1 | |
| Unit Title: Unit 6 Application Design | Unit length: 30 x 1hr | Unit Title: Unit 13 Social Media & Digital Marketing | Unit length: 60 x 1hr | | |
| Domains of Knowledge: <ul style="list-style-type: none"> ● How are apps designed ● Potential solutions for application developments ● Generate designs for application solutions ● Present application solutions to meet client and user requirements | | Domains of Knowledge: <ul style="list-style-type: none"> ● Understand digital marketing ● Understand the use of social media in a business ● Be able to plan content and propose appropriate social media channels for digital marketing campaigns ● Be able to develop social media digital marketing campaigns | | | |
| Key Concepts: <ul style="list-style-type: none"> ● Digital Literacy ● Problem Solving ● Communication & Coordination ● Machines & Software | | Key Concepts: <ul style="list-style-type: none"> ● Problem Solving ● Communication & Coordination ● Digital Literacy | | | |
| Gateway knowledge: <ul style="list-style-type: none"> ● Use of a variety of apps ● Awareness of accessibility options ● Understanding of how apps are built ● Ability to work to a brief | | Gateway knowledge: <ul style="list-style-type: none"> ● Use of social media ● Understand that social media can raise the profile of a brand ● Awareness that websites collect and share data | | | |

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| <p>Assessment end-points:</p> <ul style="list-style-type: none"> Internally assessed coursework in response to a brief. Externally moderated. Completion by start of yr13. 17% of final grade- <p>Mandatory unit.</p> | <p>Assessment end-points:</p> <ul style="list-style-type: none"> Internally assessed coursework in response to a brief. Externally moderated. Completion by end of Spring term 1 of yr13. 17% of final grade- <p>Mandatory unit.</p> | |
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Progression map: breaks down the key concepts to specify the most important knowledge and how that knowledge builds within the curriculum.

| Key Concepts | Year 10 Media | Year 11 Media |
|----------------|---|---|
| Representation | <p>HT2-R094: Graphic design concepts and conventions</p> <p>HT1-R093: Media codes used to convey</p> <p>HT 1-R093: How style, content and layout are linked to the purpose. Client requirements and how they are defined (TA2)</p> <p>HT1-R095: TA1 Introduction (with R093 key content embedded)</p> | <p>T1- Newspapers</p> <p>T1- Radio</p> <p>T2- Crime Drama</p> |
| Audience | <p>HT1-R093: Audience demographics and segmentation (TA2)</p> | <p>T1- Newspapers</p> <p>T2-Crime Drama</p> |
| Industry | <p>HT5-R095: TA1 Introduction (with R093 key content embedded)</p> <p>HT1-R093: Media industry sectors and products (TA1)</p> | <p>T1- Newspapers</p> <p>T1- Radio</p> |
| Language | <p>HT2-R094: Purpose, features, elements and design of visual identity</p> | <p>T1- Radio</p> <p>T2- Crime Drama</p> |

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| <p>Production</p> | <p>HT2-R093: Work planning and documents used to support ideas generation (TA3)</p> <p>HT2-R093: Documents used to design/plan media products (TA3)</p> <p>HT3-R094: Techniques to plan visual identity and digital graphics</p> <p>HT3-R094: Tools and techniques to create visual identity and digital graphics</p> <p>HT3-R094: Technical skills to source, create and prepare assets for use within digital graphics</p> <p>HT4-R094: Techniques to save and export visual identity and digital graphics (with integrated R093 TA4 distribution considerations and file formats)</p> <p>HT4/5R094: NEA Assessment (working on)</p> <p>HT6-R095: Features and conventions of comics & characters</p> <p>HT6-R097: Creativity in interactive digital media</p> <p>HT6-R095: Resources required to create comics and characters</p> | <p>T1- Newspapers T1- Radio T2-Crime Drama</p> |
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|---|--|---|--|---|---|
| <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Enquiry ● Critical thinking ● Construction ● Theorisation ● Analysis | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Enquiry ● Critical thinking ● Construction ● Theorisation ● Analysis ● Media Language | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Enquiry ● Critical thinking ● Construction ● Theorisation ● Analysis ● Media Language | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Enquiry ● Critical thinking ● Construction ● Theorisation ● Analysis ● Media Language | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Planning ● Construction ● Analysis ● Media language ● Critical thinking | <p>Domains of Knowledge:</p> <ul style="list-style-type: none"> ● Planning ● Construction ● Analysis ● Media language ● Critical thinking |
| <p>Relevant Key Concepts:</p> <ul style="list-style-type: none"> ● Audience ● Demographics ● Media Forms ● Representation | <p>Relevant Key Concepts:</p> <ul style="list-style-type: none"> ● Audience ● Institution ● Media Forms ● Representation ● Genre | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Audience ● Institution ● Media Forms ● Representation ● Genre | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Audience ● Institution ● Media Forms ● Representation ● Genre | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Audience ● Branding ● Representation ● Genre | <p>Key Concepts:</p> <ul style="list-style-type: none"> ● Audience ● Branding ● Representation ● Genre |
| <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Advertising campaigns ● Working to a brief ● Context ● Jobs in industry ● Demographics | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Advertising campaigns ● Working to a brief ● Context ● Jobs in industry ● Demographics | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Designing tools ● Awareness of GIMP/Photopea ● What makes a good advert | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Use of software to manipulate images ● Different audiences ● Understand different media platforms | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Use of photo manipulation tools. ● Understanding of how to research ● How to construct a media product ● Work to a brief | <p>Gateway knowledge:</p> <ul style="list-style-type: none"> ● Use of photo manipulation tools. ● Understanding of how to research ● How to construct a media product ● Work to a brief |
| <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● 1.1 The Media industry ● 1.2 Job roles in the industry ● 2.1 Factors affecting product design ● 2.2 Client Briefs ● 2.3 Audience and Demographics | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● 2.4 Research Methods ● 2.5 Media Codes ● 3.1 Workplans ● 3.2 Idea generation ● 3.3 Documents to plan media products <p>RO94</p> <ul style="list-style-type: none"> ● 1.1 Visual identity ● 2.1 Graphic design ● 2.2 Properties of graphics and assets | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● 2.3 Planning techniques | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● 3.1 Image adjustments ● 3.2 Preparing assets for use ● 3.3 Saving and exporting <p>RO93</p> <ul style="list-style-type: none"> ● 3.4 Legislation affecting media products | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Completed NEA that fulfils a brief. <p>RO95</p> <ul style="list-style-type: none"> ● 1.1 Character features and conventions | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● 1.2 Conventions of comics ● 1.3 Resources required to create characters and comics. |

| Year 11 Media | | | | | | | |
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| Autumn Term | | Spring Term 1 | | Spring Term 2 | | Summer Term | |
| Unit Title: Component 1 Section A & B Newspapers | Unit length: 15x 1hr | Unit Title: Component 1 Section B-Radio | Unit length: 8x 1hr | Unit Title: Component 2 Section A-TV Crime Drama | Unit length: 9x 1hr | Unit Title: REVISION | Unit length: 15x 1hr |
| Domains of Knowledge: <ul style="list-style-type: none"> ● Enquiry ● Critical thinking ● Construction ● Theorisation ● Analysis ● Media Language | | Domains of Knowledge: <ul style="list-style-type: none"> ● Theorisation ● Enquiry ● Construction ● Contextual factors ● Analysis ● Comparison ● Intertextuality ● Convergence & Synergy | | Domains of Knowledge: <ul style="list-style-type: none"> ● Theorisation ● Enquiry ● Construction ● Contextual factors ● Analysis ● Comparison ● Intertextuality ● Convergence | | Domains of Knowledge: <ul style="list-style-type: none"> ● Theorisation ● Enquiry ● Construction ● Contextual factors ● Analysis ● Comparison ● Intertextuality ● Convergence & Synergy ● Media Language | |
| Key Concepts: <ul style="list-style-type: none"> ● Audience ● Institution ● Media Forms ● Representation ● Genre | | Key Concepts: <ul style="list-style-type: none"> ● Audience ● Representation ● Media forms ● Narrative ● Institution | | Key Concepts: <ul style="list-style-type: none"> ● Audience ● Representation ● Media forms ● Narrative ● Genre | | Key Concepts: <ul style="list-style-type: none"> ● Audience ● Representation ● Media forms ● Narrative ● Genre ● Institution | |
| Gateway knowledge: <ul style="list-style-type: none"> ● Demographics ● Values ● Stereotypes ● Context ● Broadsheet/Tabloid ● Politics | | Gateway knowledge: <ul style="list-style-type: none"> ● Use of radio historically ● Media platforms ● Serial programs ● Current affairs ● Commercial and public radio | | Gateway knowledge: <ul style="list-style-type: none"> ● Crime drama over time ● Stereotyping ● TV regulation ● Commercial TV/Licensed TV ● Context ● Demographics | | Gateway knowledge: <ul style="list-style-type: none"> ● All topics covered for GCSE ● How to manage time in an exam ● Thorough knowledge of set products. | |

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| <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Define what news values are and how papers select their stories. ● Explain the codes & conventions of newspapers ● Analyse The Guardian & The Sun using media terminology ● Explain the Brexit and Leave campaigns and how these are represented by the set products. ● Understand how industry and newspapers work. ● Understand digital convergence | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Understanding who listens to The Archers ● Defining the key features of Radio 4 ● Explaining the rights and regulations of the radio industry. ● Uses & Gratification and how it links to The Archers ● Understand how identity links to The Archers. | <ul style="list-style-type: none"> ● Use of sound to create tension <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● Identify codes and conventions of Crime Drama ● Explain stock characters associated with Crime Drama ● Describe mise-en-scene in relation to Luther & The Sweeney ● Understand how audio codes can create tension and anticipation ● Describe different shot types. ● Compare & Contrast Luther with The Sweeney | <p>Assessment end-points:</p> <ul style="list-style-type: none"> ● GCSE exam, 2 papers 1hr 30min each. |
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