



Computer Science Curriculum Map

Keystage 3

[Click for year 7 curriculum map](#)

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Keystage 4

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Yr	What do students learn?	Why?	Tier 3 keywords	Threshold concepts	Literacy	Assessment
KS2	IT <ul style="list-style-type: none"> - Files and folders - Software and hardware Internet <ul style="list-style-type: none"> - World Wide Web - Searching for webpages - Online safety - Acceptable behaviour online Computer Science <ul style="list-style-type: none"> - Basic programming - Algorithms 	NA	Files, folders, digital, program, information technology, software, hardware, mouse, keyboard, monitor, computer, web pages, safety, searches, tracking, trolls, coding, programming, algorithms	Digital WWW Internet Computer code	Students sit English grammar, punctuation and spelling tests at the end of Key Stage 2.	No formal graded assessment
Yr	What do students learn?	Why?	Tier 3 keywords	Threshold concepts	Literacy	Assessment
7	IT skills <ul style="list-style-type: none"> • Setting up folder structure and creating files with appropriate names • Security and passwords • Strong vs weak 	Term 1 - systems: <ul style="list-style-type: none"> - Students many not have had much experience in computer science, with a mixture of IT and computing. Will start with IT basics ensuring able to set up 	Files, folders, log in, esafety, file management, strength, passwords,	Files and folders Logging in Use and knowledge of external components of computer for example mouse, keyboard,	Spelling Q&A (Based on Tier 3 vocabulary), with homework copying out knowledge	Retrieval practice will be integrated into the start of EVERY lesson

<p>Esafety & H&S</p> <ul style="list-style-type: none"> Digital footprint How to use IT in a healthy way <p>What makes a computer function</p> <ul style="list-style-type: none"> Input and output devices Storage devices CPU and RAM <p>How do we use computers to solve problems?</p> <ul style="list-style-type: none"> Analysis Abstraction, pattern recognition, decomposition Flowcharts Selection and sequence <p>Data representation?</p> <ul style="list-style-type: none"> Binary basics, not conversion Looking at sizes and measuring appropriate file sizes Understand ASCII (and Unicode) Images in binary 	<p>folder structure, save work and name files correctly.</p> <ul style="list-style-type: none"> Will look at areas of security in school, with regards to usernames and passwords. Will ensure students are aware of strong vs weak passwords, and how they open themselves up to hacking. Protected characteristics - Faith – cyber attacks, what is personal information Later in the term will be looking at esafety and how to stay safe online. This thread will run through whole time in computer science lessons. Students will be introduced to the concept of a digital footprint and will analyse how this affects them. Protected characteristics - sexual orientation, esafety, digital footprint and staying safe on line Further to this students will look at health and safety aspects to use of IT. Protected characteristics - pregnancy: H&S during pregnancy <p>Term 2 - hardware:</p> <ul style="list-style-type: none"> We start the term looking at computers through the ages, breaking down misconception that computer science is a new topic. Protected characteristics - disability – look at Turing, autistic. Look into the hardware that is used, both input and output devices and storage devices. Throughout linking to real life situations and scenarios. This will give students understanding of how computers make our lives easier and comfortable. We identify the term CPU as a processor and what this means. Further to this learn the purpose of RAM in a system. Concept of an embedded system <p>Term 3&4 – problem solving:</p> <ul style="list-style-type: none"> We start by looking at algorithms and how they relate to our lives, introducing flowcharts 	<p>privacy, digital footprint, computing, cloud, links, secure, cyber, video, server, security, netiquette, wireless, email, programme, input, output, digital, CPU, RAM, ROM, data, memory, solid stage, representation, binary, denary, bases, switches, flowcharts, decomposition, abstraction, algorithms, sequence, selection, bit, byte, kilobyte, megabyte, gigabyte</p>	<p>websites and internet, storage, input and output devices, peripherals</p>	<p>organisers as per school policy.</p> <p>Writing</p> <p>Although there is less extended writing in CS, working out is key. This will be done via Teams and feedback there.</p> <p>Students are encouraged to use IT skills in word and excel.</p> <p>Furthermore, when the opportunity arises, teachers may ask students to explain certain concepts in their own words. This may be after a teacher has explained a certain concept to the class and wants students to narrate this in their own words.</p> <p>Oracy</p> <p>Teachers should ensure that students answer in full, eloquent sentences and should ask students to repeat these if they are not said correctly. This is to help build their public speaking skills and also to help the whole school literacy programme.</p>	<p>2 assessments long answer questions per year</p> <p>At the above assessment points, teachers will assess the learning of students using end of topic tests and multiple choice questions. (TBC) Teachers will then use this information to review and revise topics that students needed more help on. They form a diagnostic tool to help us with our “deliberate practice” approach.</p>
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- Look at breaking down (decomposition) of tasks
- Understand how abstraction works relating to basic tasks
- Students will start to design and develop their own flowcharts using appropriate symbols, based on given tasks. This will further introduce them to concept of selection and sequences
- **Protected characteristics: Age – coding at any age**

Term 5 – data representation:

- Students will start by identifying the amount of bits in different units and being able to convert between them
- We will look at what binary is. **Protected characteristics: gender reassignment, binary, non-binary**
- This will lead onto how characters are recognised on the computer through ASCII and Unicode **Protected characteristics : Race – use of images ensure diversity, ASCII vs UNICODE**
- How images are stored in binary
- **Protected characteristics: sex, first female coder**

Term 6 – ICT/ computing project:

- Students will do a consolidation project details. Hardware and how to use computers responsibility – Case study to fit a client need (hardware requirements & recommendations on cloud computing)
- Digital Literacy to include
 - o Master Slide/Navigation /Consistent house style/fit for purpose/sourcing images/storing assets /repurposing images (optimisation)
- Currently this is a scratch project but this is going to be confirmed through out the year these have been put together and already to be used. The focus on this

		<p>allows students to code and also use ict skills.</p> <ul style="list-style-type: none"> - Protected characteristics: Marriage/ civil partnership - use of images ensure diversity <p>The regular assessments points, and more importantly, the periods after the assessment points allow teachers to identify what topics have been taught well, which topics students have learnt as a result but also to identify topics to re-teach and revise before moving on to build on these skills.</p>				
Yr	What do students learn?	Why?	Tier 3 keywords	Threshold concepts	Literacy	Assessment
8	<p>Hardware</p> <ul style="list-style-type: none"> • How hardware affects performance, cache, cores, clock speed • How the fetch execute cycle works • Understand differences between ROM, RAM and what role virtual memory performs <p>Networks</p> <ul style="list-style-type: none"> • Esafety and things to be aware of • History of computing, eg: encryption • Networks and how and why they are set up • Different means by which computers talk to each other and factors that will affect speed <p>Programming to solve problems</p> <ul style="list-style-type: none"> • Understanding computer science approach to solving problems. • Able to develop computational thinking • Building on understanding of flowcharts and symbols • Programming constructs (selection, sequence and iteration) • Understanding how and why we test • Variables and datatypes <p>Data representation</p> <ul style="list-style-type: none"> • Convert from base 2 to 10 and back. 	<p>Term 1 - Hardware and effect on performance:</p> <ul style="list-style-type: none"> - We looked at storage in year 7, now we will go into further depth so students can make an informed choice of which are most appropriate for a given situation. - Students will look at the fetch execute cycle and the role of CPU and RAM. This will be investigated and put into practice through use of little man computer - Building on this students will identify factors that affect the CPU performance, eg: clock speed, cache and cores - Building on knowledge of computer systems students will investigate the links and differences of ROM/ RAM and virtual memory - Protected characteristics: H&S with pregnancy <p>Term 2 - Networking - How and why computer systems talk to each other:</p> <ul style="list-style-type: none"> - Continuing with knowledge learnt in year 7 about the history of computers students will develop their understanding of the internet, what it is and what we can now do. - Developing understanding of networks, the different kinds of set up, the pros and cons of each and need for network security 	<p>Ransomware, Virus Encryption Internet WAN, LAN, WPAN Networks Mesh Bus Wi-Fi WAP Ethernet Router Modem Bluetooth Malware Hacking Fetch decode execute CPU Cores Clock speed Cache RAM ROM Virtual memory Storage Multitasking Abstraction, decomposition, pattern recognition and algorithms Flowcharts Selection</p>	<p>Esafety Internet Hardware Peripherals Storage Space CPU Speed Flowcharts and symbols Binary Base 2 Denary Base 10 Bits and sizes ASCII File size Images</p>	<p>Spelling Q&A (Based on Tier 3 vocabulary), with homework copying out knowledge organisers as per school policy.</p> <p>Writing Although there is less extended writing in CS, working out is key. This will be done via Teams and feedback there.</p> <p>Students are encouraged to use IT skills in word and excel.</p> <p>Furthermore, when the opportunity arises, teachers may ask students to explain certain concepts in their own words. This may be after a teacher has explained a certain</p>	<p>Retrieval practice will be integrated into the start of EVERY lesson</p> <p>2 assessments long answer questions per year</p> <p>At the above assessment points, teachers will assess the learning of students using end of topic tests and multiple choice questions. (TBC) Teachers will then use this information to review and revise topics that students needed more help on. They form a diagnostic tool to help us with our “deliberate practice” approach.</p>

<ul style="list-style-type: none"> • Conversion to and from ASCII • Cultural need to Unicode • Image storage, understanding of pixels and colour depth and resolution. Relating this to file sizes (and compression) 	<ul style="list-style-type: none"> - Students will look into factors which affect networks and transfer speeds - The main computer networks (LAN, WAN and WPAN) - Hardware required to connect to different networks - Methods to connect to different networks - Factors which affect networks (Range, cost, security and data transfer speed) - Computer system and network security o <ul style="list-style-type: none"> o Purpose firewall o o Purpose of anti malware (quarantine) o Purpose of encryption <p>Protected characteristics: Disability - Turing Autistic cracking the encrypted code</p> <ul style="list-style-type: none"> - Protected characteristics: Faith – cyber attacks, what is personal information? <p>Term 3&4 – programming to solve problems:</p> <ul style="list-style-type: none"> - Building on knowledge and understanding from year 7 will be looking at algorithms and continuing with fundamentals of computational thinking (abstraction, decomposition, pattern recognition and algorithms). Students will be able to break down more complex problems into sub tasks to solve problems - Building on flowchart knowledge and skills gained in year 7 students will develop these skills producing algorithms to deconstruct the problem - Students will have been introduced through basic programming the 2 main programming constructs but now include interation - Key term – variables will be introduced to students with teaching of different datatypes - Protected characteristics: Age - coding, great lever. Sex, discuss coders <p>Term 5 – data representation:</p> <ul style="list-style-type: none"> - Students will revisit what binary is. 	<p>Sequence Iteration Testing Debugging Variables Datatypes Binary Denary Overflow error ASCII and Unicode Colour depth Resolution Pixel File size</p>		<p>concept to the class and wants students to narrate this in their own words.</p> <p>Oracy Teachers should ensure that students answer in full, eloquent sentences and should ask students to repeat these if they are not said correctly. This is to help build their public speaking skills and also to help the whole school literacy programme.</p>	
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		<ul style="list-style-type: none"> - Will learn how to convert from base 10 to base 2 and visa-versa. Protected characteristics: Gender reassignment - Binary/ non-binary - This will lead onto how characters are recognised on the computer through ASCII and why Unicode needed to be invented to incorporate characters from other languages - Students will learn how images are represented on a computer. They will gain understanding of pixels, what they are (and what they are not) and learn about colour depth and resolution. Further to this they will be able to relate this to their understanding of files and sizes gained from year 7. - Protected characteristics: Race – use of images ensure diversity, ASCII vs UNICODE <p>Term 6 – ICT/ computing project:</p> <ul style="list-style-type: none"> - Students will do a consolidation project details . - This has yet to be confirmed but I have put together a project that students are working on in kodu though the responsibility for this is with another member of the clf my focus is the 7 - Protected characteristics: Marriage/ civil partnership - use of images ensure diversity <p>The regular assessments points, and more importantly, the periods after the assessment points allow teachers to identify what topics have been taught well, which topics students have learnt as a result but also to identify topics to re-teach and revise before moving on to build on these skills.</p>				
Yr	What do students learn?	Why?	Tier 3 keywords	Threshold concepts	Literacy	Assessment
9	Algorithms and Programming Techniques <ul style="list-style-type: none"> • Pseudocode / Flow charts • Computational thinking 	<p>Note: term 1 and 2 can run concurrently</p> <p>Term 1 - Algorithms and Programming Techniques</p> <ul style="list-style-type: none"> - Children are re-enforcing and further developing their computational thinking. They are learning how solve problems 	Ransomware, Virus Encryption Internet WAN, LAN, WPAN	Esafety Internet Hardware Peripherals Storage	Spelling Q&A (Based on Tier 3 vocabulary), with homework copying out knowledge	Retrieval practice will be integrated into the start of EVERY lesson

<ul style="list-style-type: none"> - Abstraction - Decomposition - Algorithmic thinking Application using a high level language Programming fundamentals <ul style="list-style-type: none"> Use of variables/ constants Operators Input/ output Assignment Programming constructs <ul style="list-style-type: none"> Sequence Selection Iteration <p>Networks</p> <ul style="list-style-type: none"> To understand the benefits of being in a network To learn the difference between LAN and WAN To learn about the internet and common services World wide web The cloud Hosting Network hardware – Modem / Router / Switch / Wireless access points To learn about different modes of connection Ethernet / Wi-Fi – Bluetooth / GPRS <p>System Security</p> <ul style="list-style-type: none"> Attacks <ul style="list-style-type: none"> Malware Social Engineering Brute force Denial of service Identification <ul style="list-style-type: none"> Physical security Ethical Hacking Prevention <ul style="list-style-type: none"> Penetration testing Antimalware / Firewall 	<p>using abstraction and decomposition. This are important life skills as well as being very useful in computing. They are being developed from year 8 by having more complex scenarios.</p> <ul style="list-style-type: none"> They are learning the fundamentals of programming techniques and being extended to more complex concepts. Students are given the opportunity to apply their computational thinking and programming skills making use of a high-level text-based language. Protected characteristics: age and sex relate to coders, there is no discrimination with code. Relate to disability as well re: Turning <p>Term 2 - Algorithms and Programming (Practical application):</p> <ul style="list-style-type: none"> Applying term1 To demonstrate programming using a high-level text based language. To make use of an IDE To use programming syntax To run/execute code To use a high-level programming language to demonstrate the following programming skills Using variables To use different data types (integers / strings) To input and output of data To use of casting when using different data types To use selection (IF/ELSE IF/ ELSE) Protected characteristics: faith via if else statements, also break misconceptions with sexual orientation and gender. To begin to correct syntax errors (with support) <ul style="list-style-type: none"> Being aware of what a syntax error is Being aware of what debugging can do 	<p>Networks</p> <ul style="list-style-type: none"> Mesh Bus Wi-Fi WAP Ethernet Router Modem Bluetooth Malware Hacking Fetch decode execute CPU Cores Clock speed Cache RAM ROM Virtual memory Storage Multitasking Abstraction, decomposition, pattern recognition and algorithms Flowcharts Selection Sequence Iteration Testing Debugging Variables Datatypes Binary Denary Hex Overflow error ASCII and Unicode Colour depth Resolution Pixel File size Malware Social Engineering Brute force Denial of service Physical security Ethical Hacking 	<ul style="list-style-type: none"> Space CPU Speed Flowcharts and symbols Binary Base 2 Denary Base 10 Bits and sizes ASCII File size Images Selection Sequence Algorithm Networks Secutiry 	<p>organisers as per school policy.</p> <p>Writing</p> <p>Although there is less extended writing in CS, working out is key. This will be done via Teams and feedback there.</p> <p>Students are encouraged to use IT skills in word and excel.</p> <p>Furthermore, when the opportunity arises, teachers may ask students to explain certain concepts in their own words. This may be after a teacher has explained a certain concept to the class and wants students to narrate this in their own words.</p> <p>Oracy</p> <p>Teachers should ensure that students answer in full, eloquent sentences and should ask students to repeat these if they are not said correctly. This is to help build their public speaking skills and also to help the whole school literacy programme.</p>	<p>2 assessments long answer questions per year</p> <p>At the above assessment points, teachers will assess the learning of students using end of topic tests and multiple choice questions. (TBC) Teachers will then use this information to review and revise topics that students needed more help on. They form a diagnostic tool to help us with our “deliberate practice” approach.</p>
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	<ul style="list-style-type: none"> ○ User access levels ○ Encryption <p>Data representation</p> <ul style="list-style-type: none"> • Binary conversions –recap • Hexadecimal • Binary addition – re-cap • Representation of data <ul style="list-style-type: none"> - character sets • Images • Sound 	<p>Term 3 – Networks:</p> <ul style="list-style-type: none"> - Children are learning how computers communicate with each other and what this means to them (everyone). At any given point with technology students will be in a network. - Students use the internet in their daily lives – they are learning specific features such as world wide web, cloud and web hosting to gain a better understanding. Many will make use of these already. - Students are learning about how different networks can be setup and why through topologies - Students are learning about different ways to connect to a network – many will make use of Wi-Fi. They will gain a better understanding why certain connections are used at certain times. - Students will learn what centralise methods can bring such as client / server (they use in schools) and how peer to peer method are different. - Students will learn about simple hardware needed to make this happen. Many already have this at home but are unable to put it into context. - Protected characteristics: faith, allow for communication and sense of family - <p>Term 4 – System security:</p> <ul style="list-style-type: none"> - Students will look at all the ways both business and personal computer systems can be compromised. - Will study legal and illegal hacking of systems and the need for it. - Look at ways to prevent loss of data and protection of systems. Will relate to real life, eg: end to end encryption is used in WhatsApp - Protected characteristics: pregnancy, working from home, relate to security issues. <p>Term 5 – data representation:</p> <ul style="list-style-type: none"> - Students will revisit what binary is. 	<p>Penetration testing Antimalware / Firewall User access levels Encryption</p>			
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		<ul style="list-style-type: none"> - Will learn how to convert from base 10 to base 2 and visa-versa. Build into this understanding of Hex - This will lead onto how characters are recognised on the computer through ASCII and why Unicode needed to be invented to incorporate characters from other languages. Relate to HEX - Students will learn how images are represented on a computer. They will gain understanding of pixels, what they are (and what they are not) and learn about colour depth and resolution. Further to this they will be able to relate this to their understanding of files and sizes gained from year 8. - Protected characteristics: gender binary <p>Term 6 – ICT/ computing project:</p> <ul style="list-style-type: none"> - Students will do a consolidation project details. Due to year nines not all necessarily doing computer science or even IT at GCSE the project is not going to be focused solely on computer science the initial idea is for this to be a graphics project where students build pixelated animated images using graphical software. Protected characteristics: race use of images <p>The regular assessments points, and more importantly, the periods after the assessment points allow teachers to identify what topics have been taught well, which topics students have learnt as a result but also to identify topics to re-teach and revise before moving on to build on these skills.</p>				
10	<p>Computer Science J277 OCR NEW SPEC Approach_2_Unit_by_unit</p> <p>Autumn Term 1 Week 1 2.4.1 Boolean logic Week 3 1.2.4 Data storage - Numbers Week 5 2.1.2 Designing, creating and refining algorithms</p>	<p>Note: programming NOT taught extensively through year 9 as 2 year course. This will be a focus throughout the whole of the GCSE, linking and ‘dipping into’ wherever possible</p> <p>This is all based on OCR suggested deliver (3 lessons per week over 2 years – approach number 2)</p>	Algorithm BIOS Bit Booting up Byte Cache Memory Clock speed Communication Protocol	CPU Speed Flowcharts and symbols Binary Base 2 Denary Base 10 Bits and sizes	<p>Reading We are great supporters of this in Computer Science as it is so important that students are able to decipher long problems.</p>	Moving towards series of mini progress checks throughout the year. These will be in Teams and forms. Will be able to analyse this.

	<p>Term 2 Week 7 2.1.2 Designing, creating and refining algorithms Week 8 2.2.1 Programming fundamentals Week 9 2.2.2 Data types Week 11 2.2.1 Programming fundamentals</p> <p>Spring Term 3 Week 1 2.2.3 Additional programming techniques Week 4 Practical Programming Skills</p> <p>Term 4 Week 7 1.2.4 Data storage - Characters Week 10 1.1.1 Architecture of the CPU Week 12 1.1.2 CPU Performance</p> <p>Summer Term 5 Week 1 1.1.3 Embedded systems Week 2 1.2.1 Primary storage (Memory) Week 3 1.2.2 Secondary storage Week 5 1.3.1 Networks and topologies</p> <p>Term 6 Week 7 1.3.1 Networks and topologies Week 8 1.3.2 Wired and wireless networks, protocols and layers Week 11 Practical Programming Skills Revision Week 12 Exam Prep</p>	<p>Term 1: Boolean logic, data & algorithms Teacher led theory understand the concepts of boolean algebra and logic circuits. Truth tables and full understanding of writing diagrams. Grounding all programming covered and how computers actually work. Linking back to binary taught end of yr 9 understanding data representation and how to represent numbers. Protected characteristics: lend themselves nicely to True or False statements, gender reassignment</p> <p>Term 2: Data representation & algorithms Introducing algorithm design, anchoring coding. Building on data representation to cover HEX, and all conversions. Linking to both sound and images Protected characteristics: sex, first coders and best are female, race via ASCII</p> <p>Term 3: Programming High in depth programming, smaller and larger programmes developed from idea, flowchart, decomposition and algorithm design. Fully preparing students for what is 60% of exam. Build up basic SQL knowledge and use of trace tables Protected characteristics: Age, Sexual orientation Coding examples, mixing up genders for set tasks. etc.</p> <p>Term 4: Architecture Tricky section for students, now fully into GCSE this will be easier make more sense, looking into CPU and registers. IE how a computer <i>actually</i> works! Protected characteristics: marriage and faith through use of images</p> <p>Term 5: Networks Sizable topic (though stripped down from J276). Covering how different networks work and reasons why different ones are constructed. Advantages and disadvantages of each. Linking to real life/school environment. Protected characteristics: pregnancy, can relate to work from home and security, race through use of images</p> <p>Term 6: Networks & exam preparation</p>	<p>Computer Misuse Act (1990) Computer System CPU Custom written software or bespoke software Data Protection Act Dynamic IP Address Embedded Flash memory Flow diagram FTP Gigabyte Hub/switches Hyper Text Transfer Protocol http IP address Kilobyte LAN Magnetic Storage Devices Megabyte Multi-core processor Nibble Non-Volatile Off-the-Shelf software Optical Storage Devices Peripheral Device Private IP Address Protocols Pseudocode Public IP Address RAM ROM SMTP Solid State Storage Static IP Address TCP/IP Terabyte User interface Virtual Memory Volatile WAN code print Boolean random if</p>	<p>ASCII File size Images print Boolean random if elif import for modules function</p>	<p>Research for much of unit 1 will be required.</p> <p>For code will need to researched in depth.</p> <p>Writing Although there is less extended writing in Computer Science, working out is key.</p> <p>Students are encouraged to work in books. Teachers look for clear, concise and correct working out that is easy for students and others to follow.</p> <p>Furthermore, when the opportunity arises, teachers may ask students to explain certain concepts in their own words. This may be after a teacher has explained a certain concept to the class and wants students to narrate this in their own words.</p> <p>Oracy Teachers should ensure that students answer in full, eloquent sentences and</p>	<p>These will and are being built CLF wide, allowing for clearer analysis of grades.</p> <p>Mini low stakes tests after each section and as retrieval practice.</p> <p>End of topic tests end of ½ terms</p> <p>End of year OCR mock exam.</p>
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		As above, completion of networks and fully preparing students for mock exams through walking talking mocks and Q&A sessions.	elif import for modules function procedures arguments parameters text objects attributes data variables string concatenate loop return constant dictionary list tuples methods private global Pseudocode/ exam style code SQL Trace table		should ask students to repeat these if they are not said correctly. This is to help build their public speaking skills and also to help the whole school literacy programme.	
11	<p>Computer Science J277 year 2</p> <p>Autumn Term 1 1.4.1 Threats to computer systems and networks 1.4.2 Identifying and preventing vulnerabilities 1.5.1 Operating systems 1.5.2 Utility software</p> <p>Term 2 2.3.1 Defensive design 2.3.2 Testing 2.5.2 The Integrated Development Environment (IDE)</p> <p>Spring Term 3</p>	<p>Term 1: Threats to data and networks Much of the networks has been covered in year 10 though there will be elements that need to be revisited and focused on some of threats to data have been covered throughout year 10 through homework's though again this needs to be an area focus utility software in the operating system will be looked at in depth. Protected characteristics: disability, faith, race through use of images</p> <p>Term 2: Testing and IDE Testing has been discussed and covered throughout year nine and 10 and the features of the ide this will be visited in more depth and related 2 coding tasks set. Protected characteristics:</p>	Algorithm BIOS Bit Booting up Byte Cache Memory Clock speed Communication Protocol Computer Misuse Act (1990) Computer System CPU Custom written software or bespoke software Data Protection Act Dynamic IP Address Embedded Flash memory Flow diagram FTP	CPU Speed Flowcharts and symbols Binary Base 2 Denary Base 10 Bits and sizes ASCII File size Images Boolean logic Pseudocode Boolean random if elif import for modules	As year 10.	As year 10 Mock exams throughout year timetable TBC

	<p>Practical Programming Skills Revision 2.1.3 Searching and sorting algorithms Searching and Sorting Practical Programming skills</p> <p>Term 4 Exam and prep</p>	<p>Term 3: Programming and exam code, including sorting and searching algorithms Focus on searching and sorting algorithms. This requires teacher led and understanding to be checked. Link this to coding as high amount (60%) of the exam requires accessing pseudocode. Will aim to integrate through all – linking nicely to robust programming. Protected characteristics: gender reassignment via binary algorithms.</p> <p>Term 4: all topic - Revision/ exam prep This will be a term that focuses on revision and exam prep there may be some small areas still left to cover where this is a suitable time frame. Protected characteristics: gender, marriage, pregnancy, sex all covered via retrieval practice and exam questions</p> <p>Term 5: Revision/ exam prep Exam</p>	<p>Gigabyte Hub/switches Hyper Text Transfer Protocol http IP address Kilobyte LAN Magnetic Storage Devices Megabyte Multi-core processor Nibble Non-Volatile Off-the-Shelf software Optical Storage Devices Peripheral Device Private IP Address Protocols Pseudocode Public IP Address RAM ROM SMTP Solid State Storage Static IP Address TCP/IP Terabyte User interface Virtual Memory Volatile WAN</p> <p>code print Boolean random if elif import for modules function procedures arguments parameters text objects attributes data</p>	<p>function variable assign conditions Bits and sizes Selection Sequence Algorithm</p>		
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			variables string concatenate loop return constant dictionary list tuples methods private global Pseudocode/ exam style code			
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