	Autumn 1	Autumn 2	Spring 1	Spring 1 & Spring 2	Summer 1	Summer 2
7	***Using Google apps*** Students will take a baseline assessment. Students will learn how out use google drive and classroom. They will then learn the key features of Google Docs, Slides and Forms, which they will use for all subjects from the start of year 7. KS3 BASELINE ASSESSMENT in first Weeks. Assessment based on using google apps - Week starting 18 Oct	***Data Representation & Computational Thinking*** Students will be introduced to the binary number system and also the main concepts of computational thinking (Decomposition, Pattern Recognition, Abstraction) **KS3** Assessment based on unit.		***Programming (Scratch)*** The aim is for students to practice and learn computational thinking using practical programming. Students will revisit scratch which they may have used at KS2. They will learn the basics of sequencing instructions, decomposition, pattern recognition and abstraction, KS2/3 Assessment based on programming in scratch	***Esafety, Cybersecurity and Assessment Preparation*** Students to learn about staying safe online and be introduced to the concepts of cyber security. Students will be prepared for their assessment. KS2/KS3 Final Summer Assessment based on all previous topics.	***Spreadsheets*** Students to learn about the basics of spreadsheets. Including basic formula and formatting. Students gain an understanding of terms such as profit/loss, revenue, expenditure etc. KS3 Assessment based on components -
8	***The Internet of Things - Data Representation & Graphics*** Data Representation including Binary,HEX conversions, and graphics, Also the possibility of doing the BeBras Challenge KS3/4 Assessment based on data rep and graphics - Week starting 4th Oct	***The Internet of Things - Networks*** Students learn about Networks. Pros and cons, LAN/WAN, NW Topologies, Networking hardware and how data is sent. KS3/4 Assessment based on networks- Week starting 6th Dec	***Programming (Python)*** Students are introduced to their first written programming language as opposed to graphical ones like scratch. They will learn about data types, variables, selection and iteration. This unit of work will reinforce what students learned in year 7 (sequencing instructions, decomposition, pattern recognition and abstraction) KS3/4 Assessment based on programming concepts- Week starting 28th Feb		***Security & Encryption*** Students will learn about the different forms of security in the computer industry. Types of attacks and how they can be protected against. Encryption and why it is useful, public key and private key etc. KS3/KS4 Assessment based on Security & Encryption- Week starting 25th April	***Revision for exams and Hour of code*** Students revise all topics studied so far in preparation for end of year exam. Once the exams are over and feedback & improvement has been completed they will get a chance to work on the hour of code. **KS3** Assessment - End of yr, based on all previous topics.
9	***Hardware & Software*** Students go more in-depth learning about the characteristics of different types of primary and secondary memory. The FDE cycle is revised and the components of the CPU are described. The different categories of software are looked at. KS3/4 Assessment on HW and SW - Week starting 4th Oct	***Data Representation (Number Systems)*** Data Representation recap including Binary,HEX conversions, they will also be introduced to ASCII and other character sets. Also the possibility of doing the BeBras Challenge. KS3/4 Assessment on Number systems - Week starting 6th Dec	***Logic Gates & Boolean Logic*** Students learn about logic gates (AND, OR, NOT, XOR) They learn the rules of boolean logic. KS3/4 Assessment on Boolean Logic- Week starting 28th Feb	***Programming (Python)*** Students carry on from what they learned in year 8.. They will learn about data types, variables, selection and iteration. This unit of work will reinforce what students learned in year 8 (sequencing instructions, decomposition, pattern recognition and abstraction) and add some topics like reading and writing to files KS3/4 Assessment based on programming concepts- Week starting 25th April		***Data Representation (Sound & Graphics)*** How are graphics and sound represented in binary format. Colours and bit patterns, metadata etc KS3/4 End of year assessment based on previous topics
10	***1.1 Systems architecture*** ***2.1 Algorithms*** ***2.4 Boolean logic*** • Boolean Logic • Data Storage • Algorithms KS4 OCR new Computer Science (J277) Assessment based on past paper questions for this topic- Week starting 4th Oct	***2.2 Programming fundamentals*** • Data Types • Programming Fundamentals • Programming Skills KS4 OCR new Computer Science (J277) Assessment based on past paper questions for this topic End of Unit Assessment 15th November	***2.2 Programming fundamentals*** • Additional Programming Techniques • Programming Skills KS4 OCR new Computer Science (J277) Assessment based on past paper questions for this topic End of Unit Assessment 17th January	***1.2 Memory and storage*** ***1.1 Systems architecture*** • Data Storage Sound • Data Storage Images • Data Storage Characters • Compression • The CPU KS4 OCR new Computer Science (J277) Assessment based on past paper questions for this topic End of Unit Assessment 7th March	***1.1 Systems architecture*** ***1.2 Memory and storage*** ***1.3 Computer networks, connections and protocols*** • Embedded Systems • Primary & Secondary Storage • Networks & Topologies KS4 OCR new Computer Science (J277) Assessment based on past paper questions for this topic End of Unit Assessment 9th May	***1.3 Computer networks, connections and protocols*** • Wired & Wireless Networks • Protocols & Layers • Programming Skills KS4 OCR new Computer Science (J277) Assessment based on past paper questions for this topic End of Unit Assessment 27th JUne
11	***1.4 Network security*** ***1.5 Systems software*** ***1.6 Ethical, legal, cultural and environmental impacts of digital technology*** • Types of Threats • Identifying and Preventing Vulnerabilities • Operating Systems • Utility Systems • Ethical,Legal,Cultural & Environmental Impacts KS4 OCR new Computer Science (J277) End of Unit Assessment 4th October	***2.3 Producing robust programs*** ***2.5 Programming languages and Integrated Development Environments*** • Defensive Design • Testing • Languages • The IDE KS4 OCR new Computer Science (J277)	***2.1 Algorithms*** • Searching & Sorting Algorithms • Searching & Sorting Practical Programming Skills KS4 OCR new Computer Science (J277) Assessment - PPE	***Revision*** KS4 OCR new Computer Science (J277)	***Revision & Exams*** KS4 OCR new Computer Science (J277)	