ICT/CS
Curriculum and Assessment Map

	Half Term 1	Half-Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Year 9	**Esafety Cybersecurity**	**Data science**	**Python programming with sequences of data**	**Physical computing**	**Pre-production documentation**	**Digital media project**
Fundamental Knowledge	**eSafety:** Understand the risks of the Internet and how to stay safe online. Understand a range of ways to use technology safely, respectfully, responsibly and securely. Understand how to protect online identity and privacy.	In this unit, learners will be introduced to data science, and by the end of the unit they will be empowered by knowing how to use data to investigate problems and make changes to the world around them. Learners will be exposed to both global and local data sets and gain an understanding of how visualising data can help with the process of identifying patterns and trends.	This unit introduces learners to how data can be represented and processed in sequences, such as lists and strings. The lessons cover a spectrum of operations on sequences of data, that range from accessing an individual element to manipulating the entire sequence. Great care has been taken so that the selection of problems used in the programming tasks	This unit applies and enhances the learners' programming skills in a new engaging context: physical computing, using the BBC micro:bit. In the first half of the unit, learners will get acquainted with the host of components built into the micro:bit, and write simple programs that use these components to interact with the	**Planning documentation:** Understand the purpose of a variety of pre-production documents including mood boards, mind maps, visualisation diagrams, storyboards, scripts and work plans. Understand the needs and demographic breakdown of target audiences.	**Pizzalicious:** Using knowledge form HT5, plan (using a variety of pre-production documents) a 30 second animated advert for a fictional company called "Pizzalicious". Use practical knowledge of animation software to understand frame, cloning frames, timing and other tools within to create professional

	Recognise inappropriate content, contact and conduct and know how to report concerns This unit takes the learners on an eye-opening journey of discovery about techniques used by cybercriminals to steal data, disrupt systems, and infiltrate networks. The learners will start by considering the value of their data to organisations and what they might use it for. They will then look at social engineering techniques used by cybercriminals to try to trick users into giving away their personal data. The unit will look at the more common cybercrimes such as hacking, DDoS attacks, and malware, as well as looking at methods to protect ourselves and our	Towards the end of the unit, the learners will go through the steps of the investigative cycle to try to solve a problem in the school using data.	are realistic and engaging: learners will process solar system planets, book texts, capital cities, leaked passwords, word dictionaries, ECG data, and more. A range of pedagogical tools are employed throughout the unit, with the most prominent being pair programming, live coding, and worked examples. The Year 7 and 8 Programming units are prerequisites for this unit. It is assumed that learners are already able to write Python programs that display messages, receive keyboard input, use simple arithmetic expressions, and control the flow of program execution through selection and iteration structures.	physical world. In the process, they will refresh their Python programming skills and encounter a range of programming patterns that arise frequently in physical computing applications. In the second half, learners will work in pairs to build a physical computing project. They will be required to select and design their project purposefully, apply what they have learnt by building a prototype, and keep a structured diary throughout the process. The Year 8 and 9 programming units are prerequisites for this unit. It is assumed that learners are already able to write Python programs that use variables and data	Understand client requirements and how to stick to the needs of the client. Understand the difference between primary and secondary research. Understand the legislation surrounding the use of computers and how to ensure that students are working within the law.	animated advert for use online.

	networks against these attacks.			structures to keep track of information. They are also expected to be able to combine sequence, selection, iteration, and function/method calls to control the flow of program execution.		
Learning Checkpoint Tasks	LC1 mini test	LC2 – mini test	LC3 – Photo editing assessment task	LC4 – outcome of TA2	LC5 – Pre production test	LC6 – end of unit assessment
Common Assessment Task	TA1		TA2		TA3	
Mock Exam (if applicable)	N/A		N/A		N/A	
Interleaved Knowledge	How to use ICT safely and appropriately in and out of school (passwords, social media, cyberbullying, email, digital footprint)		This builds on knowledge gained in HT1 – ensuring organisation of folders, selecting appropriate and reliable information to incorporate into projects, whilst always maintaining safety in online use.		This builds on knowledge gained in half term 1 and 2 – selecting and using appropriate images from reliable sources and using digital graphics skills in order to edit into an appropriate way.	