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TOTTINGTON HIGH SCHOOL	**Computing**					
	Term 1		**Term 2**		**Term 3**	
Year 7	**<u>Office Skills</u>** *<u>Unit objective</u> = Pupils use formatting tools in Microsoft Word to amend and create professional documents suitable to target audience.* <u>Key concepts</u> • Using appropriate login procedures, emails and file structures • Understanding how word processing software is used in the real world • Understanding importance of and applying document formatting in MS Word	**<u>E-Safety</u>** *<u>Unit objective</u> = Pupils are introduced to different social medias, ways to use social medias correctly, how to spot fake news and how to prevent data breaches keeping themselves, and their data, safe online.* <u>Key concepts</u> • Understand the appropriate use of social media • Evaluate the advantages and disadvantages of social media in the public domain • Understand how to remain	**<u>Algorithms and Flowol</u>** *<u>Unit objective</u> = Pupils look at algorithms and how they are used in computing. Pupils then apply algorithms and create Flowcharts for real life scenarios looking at inputs, processes and outputs* <u>Key concepts</u> • Understand what an algorithm is • Explain why and how flowcharts are used in industry • Create algorithms and flowcharts based on real life	**<u>Scratch</u>** *<u>Unit objective</u> = Pupils introduced to coding in blocks via Scratch to create different programs using sequence, repetition, iterations and variable.* <u>Key concepts</u> • Introduction to block language programming • Apply computational thinking (algorithms) to solve problems • Create programs using programming elements such as sequence, repetition, iteration,	**<u>Networks from Smartphones to the Internet</u>** *<u>Unit objective</u> = Pupils introduced to Network, benefits of networking devices and how data is sent across networks using protocols* <u>Key concepts</u> • Understand what and how computer networks work • Explain different types of computer networks including advantages and disadvantages • Understand the difference between the	**<u>Using Media – Gaining support for a cause</u>** *<u>Unit objective</u> = Pupils will develop a deeper understanding of the subject by using their skills across the unit to create a blog post about a real world cause that they are passionate about e.g. Plastic, Palm Oil, Green House Gas, LGBTQ etc.* <u>Key concepts</u> • Understand the importance and impact of Social Media in the modern world • Explain how legislation (copyright, trademark) can impact using the

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	DL	digitally safe in a digital world **Me DL**	scenarios / briefs. **CT Pr**	Repetition, variable blocks. **Pr**	internet and the WWW. **CT**	internet for research and asset collection • Research effective methods of raising awareness using Social Media and the internet. **DL E&M Me**
Year 8	**<u>Office Skills</u>** *<u>Unit objective</u> = Pupils use skills to create a spreadsheet recording a company's income and expenditure working out profit or loss and using charts to represent data.* <u>Key concepts</u> • Using appropriate login procedures, emails and file structures	**<u>FMS Logo</u>** *<u>Unit objective</u> = Pupil's control, using basic textual commands, an on screen 'turtle' to perform a variety of tasks and challenges.* <u>Key concepts</u> • Explain and utilise computing concepts obtained from year 7 (sequence,	**<u>Computing Systems</u>** *<u>Unit objective</u> = Pupils introduced to Operating Systems and their functions, basic binary looking at how computers systems operate.* <u>Key concepts</u> • Identify key internal components of a computer systems • Identify input, storage and output devices	**<u>Python Intro</u>** *<u>Unit objective</u> = Pupils create programs using textual programming language to solve challenges.* <u>Key concepts</u> • Introduction to textual programming language • Understand the significance of syntax and logic errors in textual programming	**<u>Mobile App Development</u>** *<u>Unit objective</u> = Pupils use App Lab to go through the process in designing and creating an App for a specific target audience. The app uses programming fundamentals to make the app interact for the user.* <u>Key concepts</u> • Understand the importance of	**<u>Media – Web Design</u>** *<u>Unit objective</u> = Pupils will design and create a website for a Mobile Phone and Accessories shop paying attention to the golden rules of design and Target Audience of the company* <u>Key concepts</u> • Explain and identify what makes a good website

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	• Understanding how spreadsheets are used in the real world • Apply appropriate formatting in MS Excel • Use basic and advanced formula in a Spreadsheet **DL**	repetition, selection etc.) • Use of formula to calculate angles of a given shape / pattern • Define and use procedures making code more efficient. **Pr**	• Explain the role of the operating system giving examples • Understand how binary and Logic Gates are used to execute instructions in a Computer System **CT**	• Apply programming commands to code programs to solve given problems **Pr**	target audience and purpose • Using appropriate programming elements to develop a mobile app • Evaluate how the app meets the client brief **Pr Me**	• Source relevant assets and evaluate legal implications • Introduction to a range of web authoring software **CT Pr Me E&M**
Year 9	**<u>ICT in context</u>** *<u>Unit objective</u> = For a business, pupils to create a professional document in MS word, a business spreadsheet recording income, expenditure and profit & loss and produce findings in professional presentational software for*	**<u>Micro bit</u>** *<u>Unit objective</u> = Pupils use coding blocks to code a small computer. They use key skills create a variety of programs from Harry Potter Sorting Hat, to a Compass, to a dice and much more.* <u>Key concepts</u>	**<u>Python Advanced</u>** *<u>Unit objective</u> = Pupils create more advanced programs using textual programming language. Pupils recall on previous learning and are introduced to more challenging concepts.* <u>Key concepts</u>	**<u>Data Representation on the Computer</u>** *<u>Unit objective</u> = Pupils introduced to the world of binary and develop knowledge of how binary is used in images and sound to be represented on a computer* <u>Key concepts</u>	**<u>Media – Digital Imaging</u>** *<u>Unit objective =</u> Pupils are made aware of the importance of Target Audience, along with the types of images and also be introduced to skills of Photoshop and types of images.* <u>Key concepts</u>	**<u>Cyber Security</u>** *<u>Unit objective</u> = Pupils learn how hackers steal data, disrupt systems, and infiltrate networks. Pupils introduced to ways to prevent attack and ways to protect data* <u>Key concepts</u> • Understand the impact of cybercrime /

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	investment pitch to investors. <u>Key concepts</u> • Create professional spreadsheet that records income, expenditure and profit /loss for a given scenario • Create professional document in MS Word for a given scenario utilising Mail Merge • Understand how presentation software is used to deliver professional pitches / presentations in industry **DL E&M Me**	• Applying previous programing knowledge to create effective programs • Executing programs created on a hand held device (BBC Micro Bit) • Modify existing code using Java Script extension **Pr**	• Introduction to advanced programming concepts • Understand when and where to use selection, iteration and repetition • Investigate and use sub programs to make code more efficient. **Pr**	• Convert between Binary, Denary and Hexadecimal • Understand how images are represented on a computer • Understand how sound is represented on a computer **CT**	• Explain difference between bitmap and vector images • Develop image editing techniques using Photoshop • Create a digital graphic based upon a given client brief. **Me**	attacks in a digital age • Identify different methods by which a cyber-attack may be initiated • Explain ways in which organisations and individuals can prevent attacks keeping data safe and secure **CT**

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