Year	Topic(s)	Why this? Why now?
Year 7	TERM 1.1 – Safety and responsibility	**WHY THIS –** This unit will allow you to build on your knowledge gained in KS2, the topic will give you a clear understanding of the importance of e-safety, communications, programs and software. You will be able to use the knowledge gained in this topic for the entire academic year. **WHY NOW –** This unit will provide students with the opportunity to start their journey into the world of computing, Students will build on the searching technologies and online safety units covered in the year 6 curriculum.
	TERM 1.2: Computational Thinking	**WHY THIS -** In this unit, students are introduced to four computational thinking techniques: decomposition, abstraction, pattern recognition and algorithmic thinking. Learners will explore how these skills can be applied when solving a wide range of problems, both computer-based and throughout their everyday lives. **WHY NOW -** Students will gain an insight into solving both computational and everyday life problems, this unit will prepare students for the upcoming programming topics that require problems to be solved using the four computational thinking techniques.
	TERM 2.1: Programming with EduBlocks	**WHY THIS -** This unit is the first programming unit of KS3. The aim of this unit is to build learners' confidence and knowledge of the key programming constructs. The main programming concepts covered in this unit are sequencing, variables, selection, and count-controlled iteration. **WHY NOW -** This unit will provide students with the opportunity to start their coding journeys using a block-based programming language, which will act as a stepping-stone to a text-written programming language. This unit will also enable learners to retrieve previous knowledge gained in the computational thinking topic to build sequenced programs and algorithms.
		WHY THIS -

	TERM 2.2: Web Development Project (RocketCake)	In this unit, students will gain an understanding of how to design effective websites using RocketCake. Students will create a brand and visual identity for a business to build on the graphical skills gained in the last unit. **WHY NOW -** Students will build a website based on a business idea that they come up with; learners will gain an insight into the world of business combined with an element of computer science. This topic will provide students with an opportunity to practice web development whilst learning the basics of business, such as e-commerce and research methods, in preparation for the options available in KS4.
	TERM 3.1 - Modelling Data – Spreadsheets Basics (EXCEL)	**WHY THIS –** The spreadsheet unit takes learners from having very little knowledge of spreadsheets to being able to confidently model data with a spreadsheet. The unit uses engaging activities to progress learners from using basic formulas to writing their own COUNTIF statements. **WHY NOW –** This unit will give learners a good set of skills that they can use in computing lessons and in other subject areas including maths.
	TERM 3.2 – Computer Networks	**WHY THIS –** The aim of this unit is to build learners' confidence and knowledge of what a network is and how its created using hardware. Students will gain an insight into the fundamentals of computer networks, the hardware that makes a network, the types of network that exist and what the internet consists of. **WHY NOW –** This unit will provide students with the opportunity to start their journey into the world of networks, students will build on this learning in year 9 with the cybersecurity module and use their knowledge to guide them during their computer science GCSE.
Year 8	**TERM 1.1 - Impacts of Digital Technology**	**WHY THIS –** This unit builds on your understanding of E-Safety by exploring how digital technology affects society. You will learn

		about the ethical, legal, cultural, and environmental impacts of technology in the modern world. **WHY NOW –** Now that you understand how to stay safe online, you will critically think about how technology shapes the world around us. This prepares you for topics in GCSE Computer Science and Digital Information Technology.
	TERM 1.2 – SQL Databases	**WHY THIS –** This unit will allow you to build on your computational thinking skills gained in KS3. Learning SQL will give you an understanding of how to query and change data effectively. This topic will give you a clear understanding of why we use a database and how it helps to manage and store data. **WHY NOW –** Building on from the idea of computational thinking and spreadsheets in Year 7, students will learn how data can be effectively managed using SQL. This enables students to explore and analyse data in a structured way to enhance problem-solving abilities but also prepare them for understanding how to update, select, find, and delete records in a database.
	TERM 2.1 – Python Basics	**WHY THIS –** This unit introduces students to the importance of syntax in a programming language. Learning Python empowers students to express their computational thinking in a text-based language, fostering problem-solving skills and logical thinking. Python is not only a valuable skill for those pursuing the subject in KS4, but is also widely used in IT fields such as data science, artificial intelligence and web development. **WHY NOW –** Introducing Python at this stage is timely as students have already gained experience with visual programming in Scratch and database management in SQL. Python serves as a natural progression, allowing students to continue their transition from block-based programming to a text-based language. This shift enables them to delve deeper into the basics of coding, exploring concepts like syntax and data types.
	TERM 2.2 – Debugging	**WHY THIS –** Debugging is a critical skill in programming, teaching students how to identify and fix errors in their code effectively. This topic will give you a clear Debugging ensures that students

		develop the important skills needed to prepare them for their programming units throughout their time at the school, and especially if studying at KS4. **WHY NOW –** As students continue their transition from visual block-based programming to text-based languages, knowing how to problem solve errors in lines of code is essential to create functional programs. In other words, this unit helps students cultivate good coding practices and enables students to tackle more complex coding challenges in the future. This unit not only strengthens their current knowledge on Scratch and SQL, but also establishes a strong foundation into programming.
	TERM 3.1: Advanced Spreadsheets	**WHY THIS –** To build on the spreadsheet foundations from Year 7 by introducing advanced tools for data analysis, modelling, and automation that mirror real-world digital skills. **WHY NOW –** Mastering advanced spreadsheet techniques in Year 8 prepares students early for creating professional data dashboards in their future DIT Component 2 coursework.
	TERM 3.2: Graphics	**WHY THIS -** Students will learn how to use various graphical tools and components to support a website or application design. This includes a focus on user interfaces to maximise the user experience. **WHY NOW -** Students will require this knowledge to assist them in the upcoming unit 'Web development'. This unit will give them the tools needed to be able to create and edit products using a graphics editing tool.
Year 9	**TERM 1.1: Cybersecurity**	**WHY THIS –** This topic equips students with critical knowledge and skills to navigate the increasingly complex and interconnected digital world. Understanding social engineering methods, hacking

		and malware is crucial for safeguarding personal and organisational information. **WHY NOW –** This unit not only enhances students' digital literacy, but also instils a sense of responsibility in using technology securely, contributing to a safer online environment for themselves and others. Previously, students have studied online safety in KS2 and Year 7 and this unit aims to enhance their understanding of common dangers in a virtual space.
	TERM 1.2 – Computer Systems	**WHY THIS –** Learning about computer systems is important because it helps students understand how computers work. This unit explores different types of computers such as embedded and general-purpose computers. This lays the foundation for more advanced studies into the topic at KS4. **WHY NOW –** This unit gives students an overview of how computers are used in various ways. It also relates to inputs and outputs which students may have studied in KS2. Understanding hardware and software is crucial in consolidating this knowledge as it connects their programming skills built in previous units to the broader picture of how computers impact our daily lives.
	TERM 2.1: Number Systems	**WHY THIS –** Learning about number systems, including binary, denary and hexadecimals, is important because it forms the basis for how computers represent and process information. Understanding these systems is like learning the language of computers, allowing students to decode and manipulate data at its fundamental level. **WHY NOW –** As students will soon be studying Python Programming, introducing the Number Systems unit at this stage provides the foundations for understanding the language of computers. Investigating number systems builds a bridge between creative and technical skills by enhancing pupil understanding of how computers process and store information, reinforcing their programming and web development knowledge.

	Term 2.2: Data Representation	**WHY THIS –** This unit is essential in deepening students' understanding of how computers interpret and store diverse forms of information such as sound, images and text. Understanding the binary representation of multimedia content not only enhances their technical skills but also fosters a broader understanding of how data is manipulated and communicated across various technologies. **WHY NOW –** Understanding how data is represented in binary not only connects to previous studies on number systems but also provides insights into the inner workings of various technologies, from image editing software to music streaming services. This unit lays the groundwork for an appreciation of digital information and its applications.
	Term 3.1: Data Types and String Operations	**WHY THIS –** To develop students' understanding of data types and string operations — core programming concepts that underpin problem-solving and algorithmic thinking in Python. **WHY NOW –** securing these fundamentals in Year 9 ensures students enter GCSE Computer Science confident with the syntax and logic required for more complex programming challenges.
	Term 3.2: Programming with Sequences of Data	**WHY THIS –** To deepen students' programming skills by exploring how sequences like lists and arrays are used to store, process, and manipulate data efficiently in Python. **WHY NOW –** Because mastering sequences in Year 9 provides the essential bridge between basic coding and the structured, data-driven programming required for success in GCSE Computer Science.