

	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Key focus	E-safety Legal, ethical, and environmental considerations in computing		Networking Binary and binary logic		Advanced programming and algorithms	
Key knowledge and skills	<ul style="list-style-type: none"> Understanding the key concerns when using the internet and digital communications. Understanding what signs to look out for and how to act in situations. Understand the impact and consequences of their online actions. Understand the environmental responsibilities we all have as IT users Understand how technology has impacted the environment in positive and negative ways Understand the different laws students need to be aware of when using technology. Be able to construct suitable discussions that highlight both positive and negative aspects of a topic. 		<ul style="list-style-type: none"> Understanding, draw and label the key network topologies used to create efficient network structures used in organisations Understand how technology had developed and enable networks to scale globally. Understand the benefit and drawbacks to computer networks and how they affects society and businesses. Understand how to carry out mathematical processes to convert binary into denary, denary into binary and hexadecimal into denary. Understand the process of adding binary numbers. Understand what binary and hexadecimal are used in computer systems 		<ul style="list-style-type: none"> Understand how to create textual code that use selection and case selection. Understand how to create code that uses variables and constants to return outputs. Understand how to create code that enables the user to enter inputs that change the value of predefined variables Understand how to create inputs that have suitable data types assigned. Understand how to read error messages and correct syntax errors. 	
Key words/ vocabulary	Grooming / Cyberbullying / Radicalisation/ Digital footprint / sexting / Computer misuse act 1990 / Green IT / Digital divide / ethical / renewable / natural resources / recycle / Computer misuse act / data protection act / copyright, designs and patents act		Star / Mesh / Bus / Ring / Wired / Wireless / Local Area Network / Wide Area Network / Topology Binary / denary / hexadecimal / AND / OR / NOT / truth table / logic gates		If / else / selection / iteration / while loop / for loop / indentation / syntax error/ logic error	
Assessment method	Question and answering in lessons / End of topic assessments / observations in lesson					
Wider links	Legal / Ethical and environmental impacts / e-safety		Develop and apply mathematical logic		Develop and apply mathematical logic and develop programming skills	
Enrichment opportunities			Code breakers		Programming club	
Careers links	Supporting responsible internet use and reducing negative digital footprints		Software development, computer engineer		Software developer, games designer, computer analyst	