	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7 – Core IT						
Topic	Online safety		Introduction to Computers		CAD / CAM	
Knowledge	Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns		Understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal] Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems Understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits		Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability	
Skills	The use of Microsoft 365 suite including: Word, Teams and Publisher The use of File Explorer File naming conventions Google search and advanced search skills		The use of Microsoft 365 suite including: Word, Teams and PowerPoint The use of File Explorer File naming conventions Binary to denary conversion		The use of CAD/CAM software	
Assessment	Blog post and evaluation End of topic assessment		End of topic assessment		Finished product	
Links to NC	Are responsible, competent, confident and creative users of information and communication technology		Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems		Are responsible, competent, confident and creative users of information and communication technology.	

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8 – Core IT						
Topic	Introduction to programming		Dragon's Den (Introduction to Business Studies)		Digital graphics (Introduction to Creative iMedia)	
Knowledge	Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem Use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions Understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal] Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users		Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability *From Business Studies DfE Guidance –* *Know and understand business concepts, business terminology, business objectives, the integrated nature of business activity and the impact of business on individuals and wider society*		Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability *From Creative iMedia J834 Specification –* *Understand and apply the fundamental principles and concepts of digital media including factors that influence product design, use of media codes and conventions, pre-production planning techniques, legal issues and creation/publishing/distribution considerations*	
Skills	The use of SCRATCH Evaluation skills		The use of Microsoft 365 suite including: Excel, PowerPoint and Teams Excel formulae, functions and charts The use of File Explorer File naming conventions Google search and advanced search skills		Interpretation of a client brief Abstraction and algorithms – considering what goes in a poster (flowchart) The use of digital image editing software Evaluation skills	
Assessment	End of topic assessment		Portfolio – business presentation End of topic assessment		Poster (digital image) Evaluation	
Links to NC	Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems		Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems		Are responsible, competent, confident and creative users of information and communication technology.	

Key Stage 3 Subject Content	Unit covered in
Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems	CAD/CAM Project
Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem	Introduction to programming Digital graphics
Use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions	Introduction to programming
Understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal]	Introduction to computers Introduction to programming
Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	Introduction to computers
Understand how instructions are stored and executed within a computer system; understand how data of various types (including	Introduction to computers

text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits	
Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users	CAD/CAM Project Online safety Introduction to programming Dragon's den Digital graphics
Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability	CAD/CAM Project Online safety Dragon's den Digital graphics
Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns	Online safety