Year 7

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
1	Office Basics	Folder Navigation	Students to create a folder structure for all their lesson subjects	All Subjects	Understand a range of ways to use technology safely, respectfully, responsibly and securely, including their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns	
		Introduction to Office 365 and OneNote	Learn to log into their Office account and look at how to use OneNote to record their learning journey	All Subjects	As Above	
		PowerPoint	Correct use of PowerPoint	All Subjects	As Above	
		Word	Correct use of Word	All Subjects	As Above	
		Sway	Correct use of Sway	All Subjects	As Above	
		Assessment	Microsoft Forms		As Above	
		Literacy - read like a computer scientist	Current News article focus on technology	English		

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
2	E Safety	Online Safety	Making students aware of grooming, and the dangers of posting online	All Subjects	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	OneNote
		Cyber Bullying	How people find it easier to say hurtful things online	All Subjects	As Above	OneNote
		Censorship	Focus on some countries (China) and how they censor what their population can see	All Subjects	As Above	OneNote
		Phishing	Fake emails that try to collect your personal information	All Subjects	As Above	OneNote
		Plagiarism / Fake News				
		Keeping Safe	Create a poster using Publisher to show Y6 students how to stay safe online (Used as an assessment to show unsderstanding of the topic)	All Subjects	As Above	Publisher Term 1
		Report writing	Current News Topic	English		Word

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
3	Under the Hood	Components	Look at the components that make up the computer		Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	OneNote
		CPU	Break down the CPU and look at how it works		As Above	OneNote
		Binary	Converting Binary Numbers		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]	OneNote
		ASTRO PI	Online one off lesson where students get thh chance to send a program that they have written in to space	Science	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	
		Assessment				
		Literacy - read like a computer scientist	Current News article focus on technology	English		

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
4	Fantasy Story	Planning	Using their english skills and some planning the students should develop a small fantasy - choose your own adventure story	English	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	OneNote/PowerPoint
		PowerPoint Skills	Learning how to create a slide in PowerPoint and include images to suit their story	All Subjects	As Above	OneNote/PowerPoint
		PowerPoint Skills	How to create hyperlinks in PowerPoint so a user can select their own adventure	All Subjects	As Above	OneNote/PowerPoint
		Development of story	Putting the story into a PowerPoint	English	As Above	OneNote/PowerPoint
		Write a book review on the book they or their peers have produced (Replaces report writing)	Provide constructive feedback for their peers to show them how to make improvements (Used as an Assessment to show understanding)	English		Word

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
5	Scratch	Introduction	An introduction to Scratch as a programming tool		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 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	OneNote
		Inputs	Showing how a user can interact with a program		As Above	OneNote
		Sprites and Costumes	Changing how the sprite looks to give animation to their sprite		As Above	OneNote
		Loops	Showing how to repeat code without having to re-type it each time		As Above	OneNote
		Game Making	Students will create a game based on sheets provided.		As Above	OneNote
		Assessment			As Above	
		Literacy - read like a computer scientist	Current news topic focus on AI			

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
6	Image Editing	Introduction to Paint.Net	Students wil be introduced to Paint.Net. Given a guided example of how to make the background of an image black and white	Art Design Technology	Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability 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	OneNote
		Image Editing	Using the tools in Paint.Net to alter images	Art Design Technology	As Above	OneNote
		Image Editing 2	Continuation of previous lesson	Art Design Technology	As Above	OneNote
		Skill Showcase	Students get to create their own image using the skills they have learnt	Art Design Technology	As Above	OneNote
		Assessment	End of Year Assessment covering all we have done		As Above	OneNote
		Report writing	Looking at space junk and the impact that it has on the planet and future generations	English/ Geography		Word

Contingency 1 x lessons

Year 8

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
1	AI and Machine Learning	Introduction to AI	Students look at AI and what it actually is	All Subjects	Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems	OneNote
		Autonomous Vehicles	Students to think about how AI can impact jobs. They will discuss if AI could truly be in chagre of a vehicle	Design technology	As Above	OneNote
		Weak AI	Students will see how Weak AI makes decisions, based on the data available to it	All Subjects	As Above	OneNote
		Machine Learning	Students shown how AI learns from the data it is given	All Subjects	As Above	OneNote
		AI in School	Students are shown the benefits and drawback of AI in schools and how it can be used responsibly	All Subjects	As Above	OneNote
		Assessment	End of topic assessment covering all previous learning		As Above	OneNote

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
2	Micro-Bit	Introduction	Introduction to the Micro-Bit		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. 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	Scratch/OneNote
		Variables	Students to identify and use variables in their program		As Above	Scratch/OneNote
		Conditional Statements	Allow the program to choose a selection using conditional statemnts		As Above	Scratch/OneNote
		Loops	Introducing both conditional and count controlled loops		As Above	Scratch/OneNote
		Challenge	Students given a selection of challenges to complete to showcase their knowledge		As Above	Scratch/OneNote
		Report writing	Current News Topic	English		Word
		ASTRO PI	Online one off lesson where students get thh chance to send a program that they have written in to space	Science	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	Year 7 Astro Pi

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
3	BITE (Business, IT and Enterprise)	Branding	How companies use branding to sell and identify their products. Includes how companies differentiate between their own products too	Business	To 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	
		Aims and Objectives	Identifying the difference between aims and objectives	All Subjects	Business aims and objectives, how and why they differ between businesses, and how and why they change as businesses evolve	
		Market Mapping	Finding gaps in the market to launch new products in to	Business	The interdependent nature of business activity, influences on business, business operations, finance, marketing and human resources; and how these interdependencies underpin business decision making	
		Pricing	How the use of pricing strategies can change depending on the product being sold	Business	As Above	
		Advertising	The purpose of advertisement	Business	As Above	
		Assessment				
		Literacy - read like a computer scientist	Current News article focus on technology	English		

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
4	Excel	Introduction to Excel	Students are introduced to Excel as software	Maths	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	Office Basics
		Importing Data	Students are shown how to inport and structure data	Maths	Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability	Office Basics
		Representing data	Students shown how to represent data using graphs and charts	Maths	As Above	Office Basics
		Using Excel	Students given a sheet to create a spreadsheet for TBS shoing profits made from a fictional shop	Maths	As Above	Office Basics
		Using Excel	Continuation of last lesson(To be used to assess students knowledge)	Maths	As Above	Office Basics
		Data Protection Law	Law relating to the storage and use of data	All Subjects		
		Report writing	Current News Topic	English		Word

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
5	Networking	Introduction	Introduction to networks		understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	Under The Hood
		Network Topologies	Looking at different network topologies and which are better for certain situations		As Above	Under The Hood
		Network Hardware	Changing how the sprite looks to give animation to their sprite		As Above	Under The Hood
		Assessment				
		Computer MisUse Act				
		Literacy - read like a computer scientist	Current news topic focus on AI			

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
6	Python Turtle	Introduction	This will be the studetns first lesson on writing code rather than block based coding. Students will create a simple shape	Art Design Technology	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 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	Scratch / Micro-Bit
		Complex Shapes	Building on their previous knowledge studets will create complex shapes	Art Design Technology	As Above	Scratch / Micro-Bit
		Patterns	Using loops stidents will start to create repeating patterns	Art Design Technology	As Above	Scratch / Micro-Bit
		Selection	Using their knowledge of selection students will create a program where the user gets to decide what is drawn	Art Design Technology	As Above	Scratch / Micro-Bit
		Free Shapes	The students get to create their own image based on their own topic	Art Design Technology	As Above	Scratch / Micro-Bit
		Assessment	End of Year Assessment covering all we have done			
		Report writing	Looking at space junk and the impact that it has on the planet and future generations	English/ Geography		

Year 9

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
1	Data Representation	Binary Recap	Recap of Binary Numbers		To 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]	
		Hexadecimal	Introduction to Hexadecimal		As above	
		Images	How images are represented using Binary Numbers		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	
		Sound	How analogue sound is converted to digital sound		As above	
		Compression	Identifying the two types of compression and how they affect the data		As above	
		Literacy - read like a computer scientist	Current News article focus on technology	English		

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
2	Flowol	Introduction to Flowol	Introduction to Flowcharts and how each shape performs a function. Get a crossing light to flash on and off	Business All subjects		
		Algorithms	Pedestrian Crossing			
		Multiple Outputs and Loops	Log Flume Mimic Flume to travel around the ride			
		Sub-Routines	Log Flume Mimic Camera to flash at the correct time as flume passes			
		Sequencing	Log Flume Mimic, get all parts of the log flume to work in sequence			
		Assessment				
		Santa Mimic?				

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
3	BITE	Revenue	Introduction on revenue in a business. All work to be completed in an individual book to use in business studies if chosen in KS4	Business/Maths	(Business Curriculum GCSE) The purpose of the finance function, its role within business and how it influences business activity, including: • what different sources of business finance are available and their suitability for new and established businesses • the concept of revenue, costs, profit and loss, including break even and gross and net profit ratios • the importance of cash to a business, the difference between cash and profit, and cash-flow forecasting • the use of financial information in understanding business performance and making business decisions Calculations in a business context, including: • percentages and percentage changes • averages • revenue, costs and profit • gross profit margin and net profit margin ratios • average rate of return • cash-flow forecasts, including total costs, total revenue and net cash flow	Y8 BITE
		Costs	Introduction to costs involved in a business	Business/Maths	As Above	Y8 BITE
		Market Segmentation	How companies segment the market to better target their products and their customers	Business	The purpose of marketing, its role within business and how it influences business activity, including: The importance to a business of identifying and understanding its customers How businesses use segmentation to target customers The purpose and methods of market research, and the use of qualitative and quantitative market research data The marketing mix and the importance of each of the four elements – price, product, promotion and place – and how they work together How the marketing mix is used to inform and implement business decisions	Y8 BITE
		Stakeholders	Who are the stakeholders involved in a business	Business	Business stakeholders, including owners, employees and customers; their different objectives, how they are affected by business activity and how they affect business	Y8 BITE
		Franchising	Setting up a franchise			Y8 BITE
		Assessment				
		Literacy - read like a computer scientist	Current News article focus on technology	English		

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
4	PRIMM (Python)	Print Statements			use two 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	Python Turtle
		Operators and Concatenation			As above	Python Turtle
		Variables			As above	Python Turtle
		Casting			As above	Python Turtle
		Arithmetic Operators			As above	Python Turtle
		Assignment Operators			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	Python Turtle
		Debugging			As above	Python Turtle
		Literacy				

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
5	Top Trumps Data Base	Introduction				

Term	Topic	Lessons	Description	Cross curriculum	KS3 Curriculum Links	Previous Learning
6	Game Creation (Make Code Arcade)	Introduction	Introduction to MakeCode Arcade		Use two 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	Scratch / Micro:Bit
		Game Creation	Create mini games following instructions		To 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	Scratch / Micro:Bit
		Clicker game	Follow instructions to create a Clicker game		As above	Scratch / Micro:Bit
		Create Arcade Game	Create an arcade game		As above	Scratch / Micro:Bit
		Final Project			As above	Scratch / Micro:Bit
		Final Project			As above	Scratch / Micro:Bit