Year 7				
Topic	**Substantive Content**	**IT Skills**	**New Vocab**	**Earlier substantive content, skills and vocab which helps understanding**
This should include all topics, not just the LC ones.	*What they learn, including knowledge and understanding*	*What skills they learn*	*What words are they introduced too during the topic*	*What content, skills and vocab does this topic rely on from previous topics?*
Touch typing	How a keyboard is laid out. How to type effectively.	Touch Typing	Qwerty	Basic typing skills
File management, word and presentation skills.	Files and Folders Cloud Storage Layout and styles Effective searching Assessing the quality of web-pages	Log in to school network and school email Accessing Onedrive Word skills PowerPoint skills	Files and Folders Desktop Network & Drives Formatting Cloud	Ctrl-alt-delete Basic Office skills Mouse and keyboard skills
Scratch programming	Learn how to program using a visual programming language using scratch Review a Scratch game	Evaluation skills Sequencing skills Logical thinking and problem-solving skills	Sequence Variables Selection (If statements) Iteration (Forever Loops)	Scratch
Inside my computer	Identify and describe the main internal and external components of a computer system – Hardware and Software.	Research Skills Presentation skills	Inputs & Output Devices CPU, RAM, Hard Drive Secondary Storage	
Binary	Data Representation To define the terms bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte. To understand that data needs to be converted into a binary format to be processed by a computer. Basic ASCII – work out denary value of your name	Numeracy skills	Binary Ascii Character Set Bits, bytes, kilobytes, megabytes, gigabytes, terabytes	Basic maths skills
Spreadsheets	Create a spreadsheet for a Zoo and Dinosaur Toys Create charts and what if questions Create a presentation about Dinosaurs Create a banner of the Dinosaur Toy Factory	Spreadsheet and numeracy skills Chart Design Presentation Skills Research skills Data Handling	Formulas Cell references Functions (SUM) Charts Photoshop	Basic maths skills

		Creative imedia skills - Photoshop Skills		
Python	Introduction to a text-based programming language - python Chatbot Program Computational Thinking	Problem-solving	PRINT and INPUT Variables Selection Iteration with FOR & WHILE Decisions (Selection) Computational Thinking Decomposition Algorithm Abstraction Pattern Recognition string & int	Scratch
Flowol – Flow charts	Flowcharts and sequencing	Problem-solving	Algorithms and flow charting Inputs, outputs and processing Inputs, decision-making, loops, outputs and sub-routines Introduction to sensors	Computational Thinking
Enterprising Project	Working in teams Using a range IT skills Drinks Create a drinks label Advert Pitch their idea – present to the class	Range of IT skills Email	Photoshop	IT skills
Homework Projects	Gaming Project ICT & Society Project History of Computing/ Key People			

Year 8				
Topic	**Substantive Content**	**IT Skills**	**New Vocab**	**Earlier substantive content and skills which helps understanding**
File management, word and presentation skills.	Files and Folders Cloud Storage Layout and styles Effective searching Assessing the quality of web-pages	Log in to school network and school email Accessing onedrive Word skills PowerPoint skills		File Management and cloud storage
Animation	Create a short animation Research different types of animation	Creative iMedia	Frame-by Frame animation Tweening	
Spreadsheets (Retro Gaming Shop)	Create a presentation about gaming technology Banner Spreadsheet Advertising Flyer	Spreadsheet and numeracy skills Chart Design Presentation Skills Research skills Creative imedia skills - Graphic Skills	Goal Seek IF Conditional Formatting	Formulas Cell references Functions Charts
HTML and E-safety	Introduction to HTML HTML styling Use of images & Hyperlinks E-safety Internet Technology	Coding skills Research skills	Digital Footprint Cyberbullying HTML tags CSS Hyperlink IP Address DNS ISP Packet Router Mesh Network	E-safety in PSHEE
Mission to Mars	Space Exploration and Robotics	Research & Presentation skills	Sensors, GPS	Inside my Computer
Code Breaking	Cyphers & code breaking Bletchley Park and Alan Turing	Research & Presentation skills	Ciphers Alan Turing & Bletchley Park	E-safety
Python	Developing programming skills.	Computational Thinking skills Programming skills	Algorithms Syntax Errors Logical Errors	Programming Constructs & Python code Programming Basics

	They learn about inputs, outputs, variables, IF statements, while and for loops. • Guess the number game • Maths Quiz • Magic Ball History of Computing – impact of new technologies		Sub-routines Boolean Data types and Logical operators Random Number	
Boolean	Learning about logic gates: AND, OR and NOT	Logical thinking skills	Logic Gates Truth Tables	Python Boolean Logic Databases query operators
Robotics & Microbits	Robotics and AI – Impact on society Working in teams to complete coding challenges using the Microbits	Team work Coding skills Problem-solving	Micorbits Sensors	Programming Constructs & Python code
Problem-solving Mission-maker	Play and Make a game using an application. Event programming (Cause and effect) Problem Solving Skills Hacking	Menu navigation Planning Event and Action	Events Hacking Behaviours Attributes Objects	Scratch programming Computational Thinking Programming Basics
Homework Projects	Smartphone Technology: input, output and sensors. Investigate how smartphones can be used to help people. Computing Theory	IT Skills	GPS Sensors Communication technology	

Year 9				
Topic	Substantive Content	IT Skills	New Vocab	Earlier substantive content and skills which helps understanding
Photoshop & Data Representation	Learning about how bitmap images are represented on the computer Know how to calculate an image file size Learn about different types of bitmap formats (GIF, jpeg, PNG, etc.) Develop a range of advanced photoshop skills Discuss the social impact of airbrushing images	Photoshop skills – Layers, brush, blending, image adjustments, masks and filters Creative iMedia	HEX colours Pixel Image Resolution Colour Depth Vector v. Bitmap Compression Layers Blending Masks	Photoshop skills in Year 7/8
HTML, CSS, Web design & Usability Design	Plan, design and create a website Develop HTML Skills	Creative iMedia – photoshop skills Storyboarding, Mood boards and mind mapping tools	Usability Navigation Storyboarding HTML Tags	HTML in Year 8 project
Enterprising Project	Young Entrepreneur Project Create a presentation, logo, mood board, advert, poster and business card.	Creative iMedia skills Team work	Moodboards Video Editing	Photoshop skills
Cybersecurity	Date Encryption Cyber-Crime Risks and Prevention measures Password Security Computing Laws Hacking	Research & Presentation skills	Malware DDos Social Engineering Hacking Firewalls Encryption Anti-virus Passwords	E-safety Codebreaking
Networks & Internet Technology	Learn about networks and Internet Technology	Presentation skills Research skills	Internet Vs WWW LAN/WAN Network Hardware	

	Different ways of connecting to the internet and other devices (3G/4G, Bluetooth, Wifi)		Internet Protocols, HTTP IoT IP addresses DNS Packets	
Python	Python Types of Programming Languages	Research and Presentation Skills	Lists Assembly Languages Machine Code Translators High level/ low level languages	Programming Constructs and Python Sensors from Microbit project
Homework Projects	Social Media Investigate different types of social media Positive and negatives of social media	Team work Mind mapping skills	Social networks, blogs, microblogging, wiki, content communities, forums Privacy, Fake news, Grooming	E-safety
Database skills	Introduction to Databases Tables, Fields, records, queries, forms and reports Create and modify a contacts database Search a films database. Data security and Computing Laws	Searching (Queries) Data Structures	Records Fields Data types Queries Reports	Spreadsheet skills Data Types Data Handling