IT & Computer Science KS3 Bands - Year 7

	Low Band			Middle Band			High Band		
	Define	**Identify**	**Explain**	**Generate**	**Compare**	**Analyse**	**Evaluate**	**Reflect**	**Innovate**
Functional Skills & e-safety	Recognise and define key terms	Identify the appropriate software. Identify e-safety risks	Explain how to create a document and how to send an email. Explain how to keep yourself safe online.	Generate an e-safety guide using formatting skills	Create & Compare Formal and Informal documents & emails and identify the difference	Analyse the different features of an email system and the security risks of using email	Evaluate the importance of learning about e-safety	Reflect on how you would use different software for different tasks and how you would stay safe online	Apply what you have learnt into other areas of your work throughout the year
Computer Science - Flowcharts	Recognise all symbols used in flowcharts	Identify what each flowchart symbol represents	Explain what actions are taking place in a given flowchart	Use relevant flowchart symbols to generate flow charts for given situations / processes	Compare different flowcharts for the same scenario to identify which is the most efficient	Analyse a flowchart to identify whether it is complete and fit-for-purpose. If not, identify the issues and how they could be resolved	Evaluate whether flowcharts are a useful planning tool and where they are suitable for use	Reflect on what processes / situations in real-life could benefit from using flowcharts as a planning tool	Apply what you have learnt about flowcharts to help you plan programs in both Scratch and Python.
Computer Science - Scratch	Recognise and define key terms	Identify programming constructs in use (loops, selection)	Explain what snippets of code do; identify and explain errors in code	Design and create scratch programs for a given scenario	Compare different problem solutions - code in two different ways (shapes, quiz, moving)	Analyse different problem solutions - code in two different ways (shapes, quiz, moving)	Evaluate a set piece of code and own work	Reflect on skills learnt and how it can be applied generally to problem solving and to other subjects	Apply what you have learnt by designing and creating an original game of your choice in Scratch
Computer Science - Theory - How computers work	Recognise and define key terms relating to how computers work	Identify whether particular devices are input, output or storage devices.	Explain how a computer receives data, processes it and outputs it, as well as explain the different storage devices	Generate an interactive user guide to identify the differences between input, output and storage devices, including examples of each	Research and compare the main ways in which people communicate today and how they communicated 30 years ago	Analyse the different ways that people communicate today - e.g. which is the most efficient, the quickest, the easiest, the cheapest, the safest	Evaluate whether advances in technology have changed how people communicate over the last 30 years	Reflect on how your understanding of how computers work has changed during this module and how a computer doesn't always look like a computer	You have learnt that communication methods have changed due to technology. Conduct independent research into how devices communicate with each other i.e. networks, the internet
Research Skills	Recognise and define key terms	Identify types of Research and ways of conducting research	Explain the different types of websites and their uses	Generate research for a specific topic. Using source tables & reference lists	Compare a variety of sources used for research	Analyse the positive and negative impacts of the WWW on research	Evaluate independent research and the reliability, trustworthiness of the sources	Reflect on research skills learnt and how you can apply these skills to everyday life	Apply what you have learnt to conduct independent research to create an innovative solution

IT & Computer Science KS3 Bands—Year 8

	Low Band			Middle Band			High Band		
	Define	**Identify**	**Explain**	**Generate**	**Compare**	**Analyse**	**Evaluate**	**Reflect**	**Innovate**
Digital Graphics	Recognise and define key terms	Identify the appropriate software available to create a range of Digital Graphics	Explain how Digital Graphics are represented	Design and create a vector graphic & composite image	Create & Compare different graphics for a variety of purposes & audiences	Analyse the impact of file size, file types, file properties and other metadata for Digital Graphics	Evaluate your own graphics and how it meets your design, purpose & audience	Reflect on skills learnt and how you can apply this to creating any digital graphic	Apply what you have learnt to create original graphics for specific audience and purpose
Functional Skills - Spreadsheets	Recognise and define key terms	Identify the software used and key features of a spreadsheet	Explain the purpose and audience of a variety of spreadsheets	Design a spreadsheet to model behaviour of real-world problems and physical systems	Create and Compare different ways to model real -world problems and when a spreadsheet is appropriate to use	Analyse the effectiveness of a spreadsheet and the formulas used	Evaluate a Spreadsheet that models the behaviour of real-world problems and physical systems	Reflect on skills learnt and how you can apply this to create your own spreadsheet for a specific scenario	Apply what you have learnt to model data to an original problem
Computer Science - Python	Recognise and define key terms	Identify programming constructs in use (loops, selection)	Explain what snippets of code do; identify and explain errors in code	Design and create programs for a given scenario	Compare different solutions to a problem, identifying which is error-free and solves the given problem fully.	Analyse one block-based language and one text-based programming language	Evaluate a set piece of code and own work Evaluate which provides a better start to programming for students - text-based or block-based programming languages	Reflect on skills learnt and how it can be applied generally to problem solving and to other subjects	Apply what you have learnt and conduct independent research to code a solution to a real-life problem of your choice
Game Design	Recognise and define key terms	Identify the different types of computer games and the different ways to play computer games	Explain the key features of a Computer Game	Generate Characters, Sprite Sheets & Backgrounds for a Game Concept	Compare different software available for creating computer games, while creating a computer game	Analyse the impact computer games have on society	Evaluate your own computer game and how it meets the design, purpose & audience	Reflect on skills learnt and how you can apply this to creating a future computer game	Apply what you have learnt by designing and creating an original game of your choice in a software of your choice

IT & Computer Science KS3 Bands—Year 9

	Low Band			Middle Band			High Band		
	Define	**Identify**	**Explain**	**Generate**	**Compare**	**Analyse**	**Evaluate**	**Reflect**	**Innovate**
Information Technology	Recognise and define key terms	Identify IT skills needed for a range of jobs	Explain how technology impacts our everyday lives	Generate a wide range of documents using a variety of skills	Compare different software depending on scenario, purpose & audience	Analyse a client specification and the requirements needed to meet the clients needs	Evaluate your own work including how work meets its purpose and audience	Reflect on skills learnt and how these can be applied to everyday life	Apply what you have learnt to show effective use of IT skills across all subjects
Computer Science - Theory - Cyber Security	Recognise and define key terms	Identify threats to cyber security e.g. phishing, shoulder surfing	Explain how cyber security threats can be prevented	Generate a help sheet for Y7 students with advice to help them stay safe from cyber security threats	Compare the ways in which cyber security threats can affect businesses, governments and individuals	Research a major cyber security incident and analyse the causes of the incident as well as the impacts on the affected party	Evaluate whether the benefits of using technology outweigh the cyber security risks / threats of using technology e.g. mobile phones	Reflect on and explain whether what you have learnt in this module will make you more aware of cyber security threats and how to prevent them	Conduct independent research into the 'Go Henry' pocket money app and bank card for children. Identify the strengths and weaknesses of this app from a cyber security perspective, as well as suggesting ways that the company could keep children and their money safe.
Computer Science - Python	Recognise and define key terms	Identify what a piece of code will do when executed. Identify errors in a given piece of code	Explain, using examples, the difference between 'while loops' and 'for loops', including suitability of each in different situations	Generate a program using at least one function appropriately	Compare situations where using functions would be appropriate when coding and situations where it would not be appropriate to use functions	Analyse given programs to identify whether functions would be appropriate and why	Evaluate the followng: Functions are always superior to loops when writing programs	Reflect on previous programs you have written to identify whether any could be re-written using loops and / or functions	Create an original program to solve a real life program using the programming techniques you have learnt
Websites	Recognise and define key terms	Identify the key features of websites	Explain the purpose and audience for a variety of websites	Design and create a website to meet specific client requirements	Create and Compare websites using different types of software; including HTML	Analyse the impact of using different devices to view websites & the impact of how we connect to the internet	Evaluate your own website and how it meets the design, purpose and audience	Reflect on the skills learnt to create websites and how you can apply this to future websites	Apply what you have learnt and conduct independent research to create an innovative solution