Computing Curriculum Long Term Plan

		Term 1		Term 2		Term 3	
Year 7	Big Idea	Are you safe online when using the internet?	What is data and how do computers store it?	What are algorithms and flowcharts?	What is a computer system and what's needed to build one?	How do you program a Micro: bit computer to perform a task?	Can you digitally manipulate a photo in Photoshop?
	Key Knowledge and skills	**Emails** Pupils learn the skills required to use and write emails **SMART Rules** Pupils learn the SMART Rules so that they can use the internet in a safe manner.	**Binary and Denary** Pupils learn how to convert between Denary and 8 bit Binary **Data** Pupils learn how data is transmitted throughout a PC and networks.	**Algorithms** Pupils learn what makes a successful algorithm for a robot to follow **Flowcharts** Pupils learn how an algorithm can be represented using a flowchart to decompose a problem.	**Hardware and Software** Pupils will learn the difference between hardware and software **Components** Pupils will learn the basic components that allow a computer to function	**Programming** Pupils will learn the syntax of how to program a Micro: bit **Computational Thinking** Pupils will learn how to decompose and write an algorithm for a Micro: bit to follow.	**Editing** Pupils will learn how to successfully edit and manipulate a photo. • Layer Masks • Green Screens • Photoshop
	End Point	Pupils create and present a presentation to the class on the importance of staying safe online, showing the skills and	Pupils will be able to convert between Binary and Denary, and complete Binary Additions.	Pupils will have the skills to write a successful algorithm that a computer can follow, and then use this skill in Y8	Pupils will have the skills gained to recognise components and how they can impact a computers performance.	Pupils will create a showcase of Projects created in Micro: bit, with explanations of what the programs do and how they work.	Pupils will create an image of themselves and edit and manipulate it with different assets to create something completely different.

		knowledge gained.		to write programs in Python.			
Year 8	Big Idea	Are you safe online when uploading videos to the internet?	How do you use Formulas in Spreadsheets?	How and why do we have base 2, base 10 and base 16 number systems?	How do you create algorithms in Python?	How do you make your own video game?	What is real and what is fake? How do you know?
	Key Knowledge and skills	**Digital Footprints** Pupils learn how using the internet leave a lasting mark, and the effects this can cause. **Sharing Videos** Pupils learn how to safely use social media in relation to posts and videos shared.	**Formula** Pupils learn how formulas are used in Spreadsheets to perform calculations. **Data Presentation** Pupils learn the importance of presenting data in graphs and charts, and how this can be misleading.	**Binary and Denary** Pupils recall how to convert between Denary and 8 bit Binary **Hexadecimal** Pupils learn how to convert Denary/ Binary into Hexadecimal and how it is useful to represent large binary numbers.	**Syntax** Pupils learn the basic syntax of python and how to implement it. **Selection** Pupils learn how selection is used to make choices in programming.	**GML** Pupils will learn how to code a game using Game Maker Language **Sprites** Pupils will learn how to make successful 8 bit sprites when creating characters **Decomposition** Pupils will learn how to break a problem down into small more manageable steps.	**Reliability** Pupils will learn how information online can be unreliable, and will explore how they can check the reliability of information

	End Point	Pupils create and present a presentation to the class on the importance of staying safe online, showing the skills and knowledge gained.	Pupils can create and alter spreadsheets in excel	Pupils will be able to demonstrate how to convert into Hexadecimal from any 8 bit Binary number.	Pupils create a quiz made in Python for other pupils to use. This will show of the skills gained and then implemented.	Pupils will have used their skills to create a working Maze Game.	Pupils will create a Hybrid Pet on Photoshop to show how misinformation can be created.
Year 9	Big Idea	How do you protect your online Identity?	How do you create complex algorithms in Python?	How do you edit a film using industry standard software?	How do computer systems and network's function?	How does Media influence audiences?	How do app developers create apps?
	Key Knowledge and skills	**AI** Pupils will learn how AI can be used which can lead to misinformation **Hacking** Pupils will learn how their accounts can be compromised to Hackers and how to mitigate this from happening.	**Selection** Pupils will learn how selection can be used in programming to give a user a choice. **Loops** Pupils will learn how a loop can be intergraded into a program.	**Premiere Pro** Pupils will learn how to use the basics of Premiere Pro to edit footage to make a successful film **Media** Pupils will learn about sounds and colour grading and the impact of this on audiences.	**Components** Pupils will learn the basic and complex components that allow a computer to function **Networks** Pupils will learn how data is transmitted across networks, and the difference between LANs and WANs	**Genre** Pupils will learn codes and conventions and the impact that has on audiences **Production** Pupils will learn production techniques such as camera work, composition and mis-en-scene	**UI** Pupils will learn what makes a successful User Interface **UX** Pupils will lean how a User Experience can impact the usage of an app

	End Point	Pupils create a presentation for a online safety campaign that would be delivered to other pupils.	Pupils will create a variety of programs such as calculators and a Christmas quiz.	Pupils will create a tourism advert using footage provided	Pupils will be able to identify key components of a computers and explain the difference between LANs and WANs	Pupils will be able to identify a variety of camera angles and distances and explain the different codes and conventions of genres.	Pupils will create a design for an app of their choice which will be interactive to use.