COMPUTING & IT
Plans for Year 7 Curriculum

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	**E-Safety and Cyber Attacking** To introduce the students to managing digital files within a large computer network, how to ***stay safe*** when using IT technology to navigating online environments, and the responsible use IT resources to avoid inappropriate ***content***, ***contact*** and ***conduct***.		**Scratch** An introduction to the programming constructs of ***sequence***, ***selection*** and ***iteration*** through the use of the graphical programming language "**Scratch**".	**Web Design and Introduction to computing** To develop an understanding that webpages are constructed through the text-based programming language "**HTML**", and to use it to construct simple webpages that include text, images and hyperlinks, to display basic computer hardware information.		**Mastering micro:Bits** To develop problem solving programming code for the mini-computer systems "**micro:Bit**", and understand how a ***coded process*** will handle ***input*** actions to produce specific ***outputs***. To see how computer code (software) can control hardware.
Assessed through	*Research and presentation work to explore online safety. Key vocabulary assessments. Extended home learning task. End of unit test.*		*Programming projects and tasks to develop scripts to solve problems, whilst identifying the standard programming constructs. Key vocabulary assessments. Extended home learning task. End of unit test.*	*The guided development of HTML webpages that give information about a topic. Key vocabulary assessments. Extended home learning task. End of unit test.*		*The guided development of programming code to control the output of a micro:Bit mini-computer. Key vocabulary assessments. Extended home learning task. End of unit test.*

COMPUTING & IT
Plans for Year 8 Curriculum

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	**Internet Security** To develop the ***responsible use*** of online communication and identifying and protect yourself from the risks that it might bring. To consider the rule of ***encryption*** within communication.		**Robomind** A development of the programming constructs of ***sequence***, ***selection*** and ***iteration*** through the use of the graphical programming language "**Robomind**". To solve problems using ***computational thinking*** methods.	**Computer Crazy** To develop student understanding of ***computer systems*** and the relationship of ***hardware*** and ***software***, whilst extending their knowledge and understanding of the use of binary numbers. To being to write text-based programming code in "**Python**".		**Python Programming** To develop coding techniques in the use of the text-based programming language of Python. To develop skills of ***computational thinking*** and employing the programming constructs of ***sequence***, ***selection*** and ***iteration***.
Assessed through	*Research and presentation work to explore online communication. Key vocabulary assessments. Extended home learning task. End of unit test.*		*Coded problem-solving tasks. whilst identifying the standard programming constructs. Key vocabulary assessments. Extended home learning task. End of unit test.*	*Assignments to correctly define computing terminology, calculate binary and write Python programs. Key vocabulary assessments. Extended home learning task. End of unit test.*		*The guided development of simple Python programs to solve set tasks. The development and annotation of code. End of unit test.*

COMPUTING & IT
Plans for Year 9 Curriculum

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 9	**<u>Computer Systems, Network and Security</u>** To study in detail the components of a computer system and how their use is interlinked, and how networks are used for communication. To understand and be ***critical*** and ***responsible*** users use of social media, whilst being confident in identifying and protect self and others from the risks that it might bring. To understand the role ***cryptography*** plays in keeping data safe. To have confident ***digital literacy*** skills.		**<u>Algorithms</u>** To develop the use of the text based high-level programming language "**Python**", to solve algorithm-based problems. To further embed the programming constructs of ***sequence***, ***selection*** and ***iteration,*** whilst using ***computational thinking***.	**<u>Data Representation & Logic Gates</u>** To understand the binary number system within the use of computers, and to be confident with the calculation of ***data file sizes*** within the resources of a computer. To convert between ***number systems*** and understand of the computing logic gate of ***AND***, ***OR*** and ***NOT*** are used.		**<u>App and Game Development</u>** To understand the elements and processes required for computer application and digital game development. To be a **designers** and **creators** of digital applications and **evaluate** their effectiveness.
Assessed through	*Assignments to correctly define and identify computing terminology. Key vocabulary assessments. Research and presentation work to explore online communication. Key vocabulary assessments. Extended home learning task. End of unit test.*		*Coded problem-solving tasks. whilst identifying the standard programming constructs. Key vocabulary assessments. Extended home learning task. End of unit test.*	*Question exercises. Key vocabulary assessments. Extended home learning task. End of unit test.*		*Design, write, test and evaluate coded solutions to tasks. whilst identifying the standard programming constructs. Key vocabulary assessments. Extended home learning task. End of unit test.*