KS3 Computing Curriculum Overview 22/23

	AUT 1	AUT 2	SPR 1	SPR 2	SUM 1	SUM 2
Year 7	**Introduction to Computing at HHS and E-Safety Project** Students will discuss how to collaborate effectively through the creation of an E-Safety project, with a focus on cyberbullying.	**Computer Hardware and Software** Students will become familiar with binary, the F-D-E cycle, how different components that form a computer work and how they are similar to the human body, such as the processor, monitor, keyboard and mouse.		**History of Computing** Students will learn about key players in Computing history, including Sir Tim Berners-Lee and Grace Hopper. Students will discover how Boolean logic is applied in every day Computing and how Alan Turing played a role in WW2.	**Using Media - Gaining support for a cause** In this unit, students will learn about the importance of using copyright free images, ensuring credibility of sources and creating a blog.	**Introduction to Python** Students will make connections from Scratch and apply their knowledge of inputs, processes and outputs from Scratch and block-based programming to building basic programs in Python.
Year 8	**Networks** Students will learn how a network is constructed, LANs, WANs and how the internet works. Students will also look at the different types of network (eg, star, mesh) and suggest suitable applications of these.	**Canva** Students will become familiar with this increasingly popular graphic design platform, used to create social media graphics, presentations, posters, documents and other visual content.	**Website Design in HTML and CSS** Students will understand the key structures of web pages and discuss the importance of design, accessibility and usability through the use of ALT tags and formatting.	**Spreadsheet Modelling** Students will explore a number of spreadsheet models with different applications, effectively using formulae and other tools including charts to help solve problems.	**Databases** In this unit, students will learn about the different types of data which may be stored in a database and use tools to import and interrogate data in a database. Some students may also explore SQL.	**Python** Students will make connections from Scratch and apply their knowledge of inputs, processes and outputs from Scratch and block-based programming to building basic programs in Python.
Year 9	**Advanced Python – Using a GUI** Students will interact with a GUI to control a Turtle on screen by applying many programming constructs including sequence, selection and iteration.		**Ethics, Law, Cybersecurity and Environment** We will discuss the ethical, legal and environmental aspects relating to Computing, including prominent issues surrounding privacy and e-waste.	**Algorithms** Students will discover the importance of algorithms in everyday life and develop knowledge in some of the key sorting and searching algorithms used in Computer Science.	**Using Fireworks** Students will build on their design skills using Canva in Year 8 to develop their own digital product and learn skills around marketing and design theory.	**Robotics and AI** Students will explore the future of computer science and understand how artificial intelligence is being used today and discuss what the future may hold for Robotics and Artificial Intelligence