

	Year 7	Year 8	Year 9
HT1	<p>Computer Basics</p> <ul style="list-style-type: none"> Logging into school Network and different portals, SMHW, sending emails <p>Under the Hood of a Computer</p> <ul style="list-style-type: none"> What is a computer? What are inputs, process, outputs and devices? 	<p>Binary</p> <ul style="list-style-type: none"> What is binary? Units Binary Addition, Binary Conversion and Hexadecimal <p>Bebras Challenge</p> <ul style="list-style-type: none"> Computational thinking skills challenge followed by national competition 	<p>Binary:</p> <ul style="list-style-type: none"> What is Binary Unit Addition / Overflow Binary Shifts Images & Sound <p>Bebras Challenge</p> <ul style="list-style-type: none"> Computational thinking skills challenge followed by national competition
HT2	<p>Bebras Challenge</p> <ul style="list-style-type: none"> Computational thinking skills challenge followed by national competition <p>Decomposition and Algorithms</p> <ul style="list-style-type: none"> 4 steps of computational thinking, creating algorithms and reviewing efficiency 	<p>Back to the Future / Cryptography</p> <ul style="list-style-type: none"> The history of computers and how they have evolved Journey of cryptography Ciphers for Encryption and Decryption 	<p>Algorithms:</p> <ul style="list-style-type: none"> 4 steps of computational thinking Flowcharts Pseudocode Searching Algorithms Sorting Algorithms <p>Cyber Security:</p> <ul style="list-style-type: none"> Techniques used by cyber criminals Legislation regarding cyber security Ethical and Moral implications of cyber crime
HT3	<p>Impact of Technology</p> <ul style="list-style-type: none"> Keeping safe on the internet, reliability of sources, understanding the impact technology has on our lives 	<p>How the Web Works / Impact of Technology:</p> <ul style="list-style-type: none"> Keeping safe on the internet, reliability of sources, understanding the impact technology has on our lives 	<p>Python Programming:</p> <ul style="list-style-type: none"> Programming etiquette Readability and efficiency of code Inputs, process, outputs Selection
HT4	<p>Scratch Programming</p> <ul style="list-style-type: none"> Programming etiquette and basics. Sequence, selection and iteration 	<p>Algorithms:</p> <ul style="list-style-type: none"> 4 steps of computational thinking Flowcharts Pseudocode <p>Python Programming:</p> <ul style="list-style-type: none"> Programming etiquette Inputs, outputs, processes 	<p>Python Programming (continued):</p> <ul style="list-style-type: none"> Data Types Arithmetic operations Selection Iteration <p>Logic Gates:</p> <ul style="list-style-type: none"> Logic Circuits Boolean Logic Properties of logic gates Truth tables

HT5	Networks <ul style="list-style-type: none"> • Different network types • The internet and WWW • Protocols and services 	Python Programming (continued): <ul style="list-style-type: none"> • Data Types • Arithmetic operations • Selection • Iteration • Project Based assessment 	Networks <ul style="list-style-type: none"> • Different network types • Connecting to networks • Network hardware • Importance of protocols
HT6	Scratch Programming II <ul style="list-style-type: none"> • Understanding subroutines • Creating user defined functions • Create and Use Lists 	Computing Systems: <ul style="list-style-type: none"> • Operating Systems, • Hardware, software and peripherals • Storing and executing programs 	Systems Architecture: <ul style="list-style-type: none"> • Generations of computers • The purpose of the CPU • Registers • Assembly Language • Von Neumann Architecture