

	Year 10	Year 11
HT1	<p>System Security</p> <ol style="list-style-type: none"> 1. Threats posed to networks 2. Social Engineering 3. Methods of Attack 4. Securing a network 5. Assessment <p>Problem Solving</p> <ol style="list-style-type: none"> 1. Introduction to Problem Solving 2. Computational Thinking 3. Abstraction 4. Decomposition 5. Assessment <p>Programming</p> <ol style="list-style-type: none"> 1. The 3 basic constructs 2. Algorithms 3. Introduction to Pseudocode 4. Flow charts 5. Variables and Constants 	<p>Networks</p> <ol style="list-style-type: none"> 1. Introduction to Computer Networks 2. Network Types 3. Network Topologies 4. Transmission Media 5. The Internet 6. Packets 7. Protocols 8. Virtual Networks 9. The Cloud 10. Assessment <p>Programming</p> <ol style="list-style-type: none"> 1. Validating input 2. Modulus Check Digit 3. Reading and Writing to Files (I/O)
HT2	<p>Representation of Data</p> <ol style="list-style-type: none"> 1. Binary and Denary 2. Conversion 3. Binary Addition 4. Binary Shifts 5. Hexadecimal 6. Representation of Text: ASCII and Unicode 7. Representation of Images 8. Representation of Sound 9. Compression <p>Computer Systems: Hardware</p> <ol style="list-style-type: none"> 1. Computer Systems 2. Embedded Systems 3. CPU 4. Fetch-Execute Cycle 5. Factors affecting performance 6. Assessment <p>Programming</p> <ol style="list-style-type: none"> 1. Comments 2. Operators 3. Nesting 	<p>Python Programming Project</p> <ol style="list-style-type: none"> 1. Introduction to Programming Project (NEA) 2. Designing solution (Pseudocode) 3. Coding solutions 4. Testing and debugging 5. Writing up the project 6. Evaluation <p>Mock Exam</p>
HT3	<p>Computer Systems: Memory</p> <ol style="list-style-type: none"> 1. RAM and ROM 2. Virtual memory 3. Cache memory 4. The reason for Secondary Storage 5. Comparing secondary storage devices 6. Assessment <p>Programming</p> <ol style="list-style-type: none"> 1. Iteration 2. FOR loops 3. WHILE loops 	<p>Python Programming Project</p> <ol style="list-style-type: none"> 1. Completion of NEA Project 2. Packaging of Work 3. Backing Up <p>Ethical, legal, cultural and environmental concerns</p> <ol style="list-style-type: none"> 1. Computers and the Environment 2. Impact on Culture and Society 3. Ethical Issues 4. Computers and the Law 5. Copyright Design and Patents Act 6. Proprietary versus Open Source Software 7. Assessment

<p style="text-align: center; font-weight: bold;">HT4</p>	<p>Computer Systems Software</p> <ol style="list-style-type: none"> 1. Operating Systems 2. The need for systems software 3. User Interfaces <p>Programming Languages</p> <ol style="list-style-type: none"> 1. The Need for Programming Languages 2. High-Level vs. Low-Level Languages 3. Machine code 4. Assembly Language (Little Man Computer) 5. The Need for Translation (Interpreters; Compilers) 6. Assessment <p>Programming</p> <ol style="list-style-type: none"> 1. Data types 2. Concatenation 	<p>Revision of all topics</p> <p>Preparation for Exams</p> <ol style="list-style-type: none"> 1. Revision of exam technique 2. Past paper practice
<p style="text-align: center; font-weight: bold;">HT5</p>	<p>Boolean Logic</p> <ol style="list-style-type: none"> 1. Logic gates 2. Boolean Algebra 3. Logic circuits 4. Truth Tables 5. Assessment <p>Problem Solving</p> <ol style="list-style-type: none"> 1. Structured Programming 2. Subroutines and menus 3. Software Development <p>Programming</p> <ol style="list-style-type: none"> 1. String Manipulation 2. Arrays 3. Multi-dimensional arrays 	<p>Final Revision of all topics</p> <p>Final exams</p>
<p style="text-align: center; font-weight: bold;">HT6</p>	<p>Searching and Sorting Algorithms</p> <ol style="list-style-type: none"> 1. Why search and sort? 2. Sorting 3. Bubble sort 4. Insertion Sort 5. Merge Sort 6. Searching 7. Linear Search 8. Binary Search 9. Assessment <p>Programming</p>	