Subject: **GCSE Computer Science**

Year 10
(Modules, Topics)

Term 1	Term 2	Term 3
What is a Computer / Computer Systems Storage Devices / Research into the types Storage – Magnetic, Optical & solid state Inputs and Outputs / Real world Examples Need for reliability / Computing History What is Binary & Hex / Moore's Law and future developments ASCII and Binary for text / Storing Images as Data CPU Architecture / RAM-ROM and Caches Secondary Storage Options / Developing Systems Memory and Storage Test / Accessible Systems for all Recap on Basic Theory / Practice on Binary & Hex Key Terms Revision / Development of processors Logic Gates and Binary Adders (2 lessons) Web Accessibility and W3C Standards / Operating Systems OS History and Development / Utility Programs **Resources**: Electronic folders of resources will be provided. **Assessment**: Written termly assessment plus weekly homework tasks set on 'Show my homework'.	Difference between WWW and the Internet / Web History Networks and Data transfer / Network Topologies Storage of Sound / Video / Data Compression Loss Vs Lossless Compression / Intro to DBMS Diff.FlatFile-Relational / Running Queries DB Forms and Report - Formatting Recap of Binary Logic using Logic.ly demo Theory Revision 1 **Resources**: Electronic folders of resources will be provided. **Assessment**: Written termly assessment plus weekly homework tasks set on 'Show my homework'.	Programming Basics / Flowcharts Psuedocode / Algorithms Introduction to Python / Use of variables If Statements / Decisions and logic Loops – While and For Functions / Subroutines Controlling text files – Read/Write/Append Python Projects **Resources**: Electronic folders of resources will be provided. **Assessment**: Written termly assessment plus weekly homework tasks set on 'Show my homework'.

Year 11
(Modules, Topics)

Term 1	Term 2	Term 3
Programming Theory Reflection 1 (Sequence Selection Iteration) Programming Theory Reflection 2 (Strings & File Handling) Programming Theory Reflection 3 (Data Types / Syntax Errors / Boolean Logic) Non-examined Assessment (NEA) Practice Tasks NEA Actual task **Resources**: Electronic folders of resources will be provided. **Assessment**: Written termly assessment plus weekly homework tasks set on 'Show my homework'.	T1 - Von Neumann Architecture / CPU Characteristics T2 - Data Capacity / Storage Devices / Data Representation T3 Networks / Hardware / DNS / Hosting T4 Wifi / Ethernet / Protocols / Packets T5 - System Security / Threats / Prevention T6 - Systems Software - OS / Utility / Backups T7 - Ethical, Legal and Cultural T8 - CS Legislation - DPA/CMA/CDPA/CC/ FOI P1 - Algorithms Searches / Sorts / Flowcharts P2 Techniques - Program Flow / Arrays / Casting **Resources**: Electronic folders of resources will be provided. **Assessment**: Written termly assessment plus weekly homework tasks set on 'Show my homework'.	P3 - Robus Programs1 - Defensive Design / Maintainability P4 - Robus Programs2 - Testing Iterative / Final P5 Computational Logic - Diagrams / Boolean Decisions / Truth Tables P6 Translators - Diff Prog Languages / IDE Tools P7 Data Representation1 - Units / Numbers / Characters P7 Data Representation2 - Images / Sound / Compression Exam Preparation **Resources**: Electronic folders of resources will be provided. **Assessment**: Written termly assessment plus weekly homework tasks set on 'Show my homework'.