Meole Brace School

Key Stage 4 Curriculum Overview – Computer Science

	Autumn		Spring		Summer	
Year	1	2	1	2	1	2
10	**Computer Architecture** - Architecture of the CPU - CPU Performance - Embedded Systems	**Memory & Storage** - Primary Storage - Secondary Storage - Units - Data Storage - Compression	**Networks, Connections & Protocols** - Networks & Topologies - Wired & Wireless Networks, Protocols & Layers	**Network Security** - Threats to Computer Systems & Networks - Identifying & Preventing Vulnerabilities	**Systems Software Ethical & Legal Impact of Technology** - Operating Systems - Utility Software - Ethical, Legal, Cultural & Environmental Impact	**Revision/Mocks & Programming** - Revise all Topics covered during Year 10 - Sit Mock Exam Paper 1 - What is Programming? - Languages & Uses
11	**Algorithms** - Computational Thinking – abstraction, decomposition to help solve problems - Designing, Creating & Refining Algorithms - Searching & Sorting Algorithms – binary, linear, bubble, merge & insertion sort	**Programming Fundamentals Begin NEA** - Data Types - Programming Techniques – sequence, selection, iteration, variables, constants, operators, arrays & assignments - Introduction to NEA - Practical Assessment	**Producing Robust Programs NEA** - Defensive Design – anticipating misuse, authentication, validation & maintainability - Testing – identifying syntax & logic errors - Complete NEA	**Boolean Logic NEA** - Truth Tables - Combining Operators: - AND, OR, NOT to solve problems - Complete NEA	**Programming Languages & IDE Complete NEA** - High & Low Level Languages - Translators - Compilers & Interpreters - Editors, Run Time - Error Diagnostics	**NEA Completion Revision & Exam preparation** - Final Hand-in of NEA Project - Revise all topics - Practice Papers 1 - Practice Papers 2