COMPUTER SCIENCE

Overview:

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| **Subject:** | Computer Science | **Exam board:** | OCR | **Lessons per week:** | Year 10 and 11 – 3 x lessons  Year 12 and 13 – 5 x lessons |

Components:

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| --- | --- | --- | --- |
| **KS4** | **Unit 1** | **Unit 2** | **Unit 3** |
| Paper 1 Computer systems | Paper 2 Computational thinking, algorithms and programming | Programming project – NEA |
| **KS5** | **Unit 1** | **Unit 2** | **Unit 3** |
| Paper 1 Computer systems | Paper 2  Algorithms and programming | Programming project |

Curriculum overview:

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| --- | --- | --- | --- | --- |
| **Term`** | **Year 10** | **Year 11** | **Year 12** | **Year 13** |
| 1 | Algorithms; first programming language; logic; System Architecture | Programming skills revision; project | Characteristics of processors and input, output and storage devices | Programming skills revision; project; computational thinking |
| 2 | Program structure; data encoding | Project – continued; theory revision | Software | Project; problem solving |
| 3 | Computer systems; Boolean logic | Theory revision; mock exam | Software development | Project; pattern recognition, abstraction and decomposition |
| 4 | Computer networks; cyber security | Algorithmic thinking and representation | Exchanging data | Project completion;  Algorithmic thinking and efficiency |
| 5 | Ethics; impact of computing | Exam preparation | Data types, data structures, and algorithms | Exam preparation |
| 6 | Software development |  | Legal, moral, cultural and ethical issues; programming project |  |