Year 11 Computer Science	Unit	Substantive Knowledge	Disciplinary Aim	Cultural Capital
Term 1 HT 1	Theory: Algorithms Programming: Project Documentation	Theory: Understand the term and processes in computational thinking Understand the differences between a linear and a binary search Understand the principles of a bubble sort, merge sort and insertion sort Programming: Know how to set success criteria Know how to test code Know how document development	Theory: • Use the skills of abstraction, decomposition and algorithmic thinking • Be able to use a linear and binary search to find data • Perform a bubble sort on a set of data and demonstrate how the number of comparisons increases in a bubble sort. • perform an insertion and merge sort on a set of data • Produce algorithms using a flowchart and pseudocode • Find and correct errors in algorithms • Complete algorithms where code is missing	Key words: Dry run, trace table, process, algorithm, flowchart, pseudocode, list, merge sort, bubble sort, insertion sort, bubble sort, linear search, binary search, computational thinking, abstraction, decomposition, algorithmic thinking. Extra-curricular: Investigate algorithms and the Rubrics cube. Lots of coverage on YouTube to get you started!
Term 1 HT 2 Term 2 HT1	Programming: Project	Students will apply their knowledge of programming to complete the exam board programming project. Students will document their project by completing success criteria, design, test plan, development, testing and evaluation.		
Term 2 HT 2 Term 3 HT1	Theory Revision	Students will participate in whole class and independent revision task including exam question focus on all topics from the specification: • Systems architecture • Memory • Storage • Wired & wireless networks • Network topologies • Systems security • System software • Ethical, legal & cultural • Computational logic • Translators and facilities of languages • Data representation • Algorithms		