# FAIRFAX
## SINCERITAS LABORIS

# Computer Science

| Year 13 |
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**Topics studied:**
Unit 1: The characteristics of contemporary processors, input, output and storage devices, Software and software development, Programming, Exchanging data, Data types, data structures and algorithms, Legal, moral, ethical and cultural issues

Unit 2: Elements of computational thinking, Problem solving and programming and Algorithms

**Exam Board:**
OCR

**Assessment Structure:**

| Unit 1 Computing Principles (2 hrs 30 mins exam) | 40% |
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| Unit 2 Algorithms & problem solving (2 hrs 30 mins exam) | 40% |
| Unit 3 Programming Project (Coursework) | 20% |

**Keywords that students must know, and be able to spell, by the end of the year:**
Central Processing Unit (CPU), operating systems, translators, interpreters, compilers, assemblers, waterfall lifecycle, rapid application development, programming paradigms, assembly language, object-oriented languages, pseudocode, encapsulation, polymorphism, abstraction, Dijkstra's shortest path algorithm, Big O Notation, karnaugh maps, Structured Query Language (SQL), databases.

**Subject specific websites to support revision and independent learning:**
www.teach-ict.com/ - general theory revision
https://www.youtube.com/playlist?list=PLCiOXwirraUBkaFcyChfn0DGPPD6n7nvq – Exam technique
www.ocrcomputing.org.uk/overview.html
https://www.youtube.com/channel/UC0HzEBLlJxlrwBAHJ5S9JQg/playlists?view=50&shelf_id=10&sort=dd – Revision videos playlist

**To help your child this year you can:**
Encourage them to attend extra provision afterschool and at lunchtimes to improve their programming project using the software we have available at school.
Encourage them to create revision notes and assess themselves using past exam papers.