COMPUTER SCIENCE

Exam board: OCR

% of exam vs. coursework/practical assessment
20% coursework, 80 % exam based (2 x 40% exam papers)

Length of exams: Paper 1 - Computing Fundamentals - 2 hours 30 minutes
Paper 2 – Algorithms and Programming – 2 hours 30 minutes

Coursework
Independent Project – Students have between September of their final year to March (six months)to create a prototype product for a client and write a report containing analysis, design, code, visual output & evaluation. Projects are commonly written in SQL, Java, Python

Typical examples have included :-
- Mobile app for teachers and students to communicate room changes, instant work feedback, homework, key announcements etc
- A fully 3D created videogame
- League of Legends web-based leader board and marketplace
- Database for a private company

Examinations
Paper 1: Computing Fundamentals

- The history of Computing & The Internet
- Inside of a computer (Components, RAM/ROM/Virtual storage/Cache/Cores/Clock speed)
- Input/Output/Process
- Storage devices (Magnetic, Flash & Optical)
- Fetch/Decode/Execute Cy cle + ALU/CIR/MDR/MAR/PC (How a computer really works)
- Binary/Hexadecimal/ASCII & UNICODE
- Compression & Encryption
- Little Man Computer (LMC) assembly programming
- Databases / Networks / Web Technologies
- Applications & System Software (Open & Closed source software + Utilities)
- Legal, social, moral & ethical issues (computer law + real world issues)

Paper 2: Algorithms & Programming

* Introduction to programming basics and techniques (Learning Java, HTML, Python, Javascript, SQL, Pseudocode)
* Waterfall model + User Centred Design
* Algorithms & Flowcharts
- Advanced Binary (addition and subtraction)

Overlap with other subjects
Computer Science works well with Maths, Science, Business Studies, Photography and Graphic Design

Updated 19/6/20