**Computer Science Year 10 (J277)**

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|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
|  | Paper 1: 1.1 System Architecture and 1.2a Memory and Storage | Paper 1: 1.2b Memory and Storage (Data Representation) 1.3a Networks, Connections and Protocols | Paper 1: 1.3b Networks, Connections and Protocols and 1.4 Network Security | Paper 1: 1.5 System Software and 1.6 Ethical, Legal, Cultural and Environmental  impacts of Digital Technology | Practical Programming Skills | Practical Programming Task |
| **Topics**  **Assessment** | End of topic tests, portfolio of tasks. | End of topic tests, portfolio of tasks. | End of topic tests, portfolio of tasks. | End of topic tests, portfolio of tasks. | Completion of programming challenges  Paper 1 Mock Exam | Written Report, Completed Program |
| **H/WK**  **Arts Mark** | Craig ‘n’ Dave Videos- Cornell Notes | Craig ‘n’ Dave Videos- Cornell Notes | Craig ‘n’ Dave Videos- Cornell Notes | Craig ‘n’ Dave Videos- Cornell Notes | Programming Booklet | Continued development of project |
|  | Role play of internal workings of CPU and Virtual memory | Accurate technical drawings including graphs and network topologies. Pixel Art | Technical drawings demonstrating network topologies | Various dramatizations of ethical and moral concerns | ASCII Art | Accurate technical drawings |

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| **Responding to post Covid gaps in learning** | Much of the programming elements of year 9 took place as home learning. Because of this the entire Summer term will be devoted to developing programming skills (and addressing any gaps) before completion of a programming project to assess these skills. |
| **Building on prior learning** | KS4 Computer Science takes a range of topics from KS3 like Hardware, Operating Systems and System Architecture and develops them to the next level. Students continue their journey into Python programming and begin to develop small programs for given scenarios. |
| **Enrichment within the Curriculum** | Opportunities to get hands on with the internal workings of a Computer and lead demonstrations at open evening for the department. |
| **Extracurricular opportunities** | Coding workshops involving experimenting with BBC Microbits and Raspberry Pi’s. |
| **Positive impacting on**  **personal development (SMSC)** | Spring 2 spends time looking at the Ethical, Legal, Moral and Environmental concerns regarding growing technology use in society including Screen time, Cyber Security, E-waste, Plastic and Precious Resource use, AI, CO2 Emissions and Energy Consumption. |
| **Preparing for the next stage of education** | The GCSE covers all the main topic areas to prepare them for A Level and encourages independent thinking and research throughout the 2 years |
| **Ways to support your child’s learning** | Praise for effort rather than being ‘clever’ shows them that by working hard they can always improve |
| Visits and trips  Websites / books /papers / magazines  TV/Films  Blogs/ podcasts | * Purchase the CGP revision guide which runs alongside the course * If possible watch the YouTube HW videos with your child and get them to explain the content to you. * Practise programming at home, subscribe to an online Python course like [www.educative.io](http://www.educative.io) * Encourage them to read the latest technology and innovation blogs online (like [www.computerweekly.com/blogs](http://www.computerweekly.com/blogs)) |