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| **Year 10 Term 1**  **GCSE Computer Science** | | Our mission is to stimulate and challenge our students to excel and provide a desire for lifelong learning and pursue careers in the world of Business, Computing, and ICT. | | | | | |
| **Enquiry Questions: Why don’t all electronic devices follow one architecture?** | | | | | | | |
| **Component 1: Computer Systems**  Students will understand the components that make up digital systems, and how they communicate with one another and with other systems. They will also recognise the impacts of digital technology to the individual and to wider society. Students also learn computing fundamentals of data and apply mathematical skills relevant to data representation. | | | | | | | |
| **Knowledge**  Students will know about… | **Application/Skills**  Students will be able to… | | **Vocabulary** | **Home Learning** | **Assessment** | **Extra Resources**  **Extended Reading** | **Cultural Capital** |
| * **Architecture of the CPU**   Students will be defining what is a computer system and recognising common CPU components. Students will also learn about the history of Von Neumann and understand the concept of the FDE Cycle.   * **CPU Performance**   Learning about the performance factors of a CPU and identify suitable   * **Primary & Secondary Storage**   Learning about volatile memory and the boot s   * **Unit Conversion**   Understand file sizes and use suitable notations to calculate files. | * Recognise CPU components and how they function in the FDE Cycle * Identify suitable computer components based on different contexts * Suggest suitable storage for various situations * Calculate file sizes with correct notation | | * Computer systems * Input, process, output, storage * Data bus * Address * Control Unit * Accumulator * ALU * Von Nemann * MAR, MDR * Program Counter * Registers * Cache * Cores * Clock Speed * Embedded Systems * Volatile * RAM, ROM * SSD, HDD, CD, DVD, BluRay, * Bit, Nibble, Byte, KB,MB,GB,PB. | High quality Homework set on Google Classrooms  Teach-ICT.com  PG Online – GCSE Computer Science | End of unit assessments   * Architecture * CPU Performance * Primary Storage * Secondary Storage * Units   Pre-Public Examination at the end of year 10 May 2023. | [Teach-ICT.com](https://teach-ict.com/2016/GCSE_Computing/OCR_J277/OCR_J277_home.html)  [Isaac Computer Science](https://isaaccomputerscience.org/topics/gcse?examBoard=all&stage=all#all)  Seneca – [Computer Science](https://app.senecalearning.com/classroom/course/a1ce4570-6e27-11e8-af4b-35cf52f905c2/section/65ac2e24-3b57-4598-b4dc-01e04eddee1b/session)  BBC Bitesize  CGP – GCSE Computer Science | The National Science Museum (free events)  <https://www.sciencemuseum.org.uk/>  The Royal Institute of Science (free events)  <https://www.rigb.org/families/family-fun-days>  **National Museum of Computing, Bletchley Park (Near Milton Keynes)**  <http://www.tnmoc.org/>    Centre for Computing History, Cambridge  <http://www.computinghistory.org.uk/> |