Year 10 Computer Science

Subject Leader: Mrs Muyunda Oldham Exam Board: OCR

Computer Science aims to engage, endeavour and excel all our students to develop into responsible digital users, that are creative, exploratory, independent and inquiring whilst using computational problem solving skills to solve, test and evaluate solutions for the 21st Century Digital Age.

Topics to be covered in Year 10

	Term 1	Term 2	Term 3
Topics to be covered	**1.1 System architecture** Architecture of the CPU CPU Performance **1.2 Memory and Storage** Primary Storage (Memory) Secondary Storage Data Storage Compression **1.3 Computer Networks, connections and protocols** Types of networks Network Topologies Wired Networks Wireless Networks Networking hardware **Intermediate UK Bebras Computational Thinking Challenge 2024** **2.2 Programming Fundamentals** Programming basics Data types	**1.4 Network Security** Threats to computer systems and networks Identifying and preventing vulnerabilities **2.2 Programming Fundamentals** Programming Fundamentals Data types Additional programming techniques **1.6 Ethical, legal and cultural environmental impacts of digital technology** Ethical, legal, cultural environmental impact **2.5 Programming languages and Integrated Development** Translators Compliers **2.1 Algorithms** Searching Algorithms Sorting Algorithms	**1.2 Memory and Storage** Units Compression **1.5 Systems Software** Operating Systems Utility Software **2.4 Boolean Logic** **AND / OR / NOT** **2.1 Algorithms** **Computational Thinking** **Designing ,Creating and Refining algorithms** **2.3 Producing robust programs** Defensive design Testing **EOY Revision** **YEAR 10 EOY EXAM**
Skills to be developed	Von Neumann architecture components diagram –registers Topology diagrams—Star, Mesh, Ring	Python Variables Python Strings Python Integers Python Functions Python Loops	Number conversion Draw Logic gate and truth tables **Revision Techniques** Mindmaps Revision cards Quizzes Frayer models Exam questions

Year 10 Useful Resources

Website Links

http://www.w3schools.com/

http://www.teach-ict.com/gcse_new.html
https://www.bbc.co.uk/education
https://www.gcsepod.com/
http://www.cambridgegcsecomputing.org/
https://ocr.org.uk/subjects/computing/
http://www.w3schools.com/
http://www.teach-ict.com/gcse_new.html

https://www.bbc.co.uk/education
https://www.gcsepod.com/
http://www.cambridgegcsecomputing.org/
http://www.w3schools.com/
http://www.teach-ict.com/gcse_new.html
https://www.bbc.co.uk/education
https://www.gcsepod.com/
http://www.cambridgegcsecomputing.org/
https://senecalearning.com/en-GB/

Marking, Assessment and Feedback

Over the course of an academic year students will complete a number of formal assessments, these will be used to assess where students are in their learning journey.

Information from these assessments could be used when making decisions regarding setting of students, reporting progress home and predicting outcome. Current guidelines mean that we cannot provide as much detailed written feedback as it typical. As a result of this, we will during lessons, evaluate students' learning through a range of activities including quizzes, class discussions, detailed questioning and other strategies. Through this, students will know where they are in their learning journey and what they need to do next to make further progress.

Teachers will continue to provide planned written feedback on selected pieces of work.

Homework

Homework will be set using the online platform Go 4 Schools.

Homework tasks are designed to prepare students for future learning or consolidate work completed in the classroom. It will be clear what should be handed in, when it should be handed in and how it should be handed in.

Contact Information:

If you would like to get in contact, please contact your child's teacher on the email address below:

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