

COMPUTER SCIENCE - INFORMATION FOR PARENTS

| | AUTUMN 1 | | AUTUMN 2 | | SPRING 1 | | SPRING 2 | | SUMMER 1 | | SUMMER 2 | |
|-------------------------------|---|---|--|--|---|--|----------|--|--|--|----------|--|
| YEAR 7 | <p style="text-align: center;">Topic</p> <p>Micro:bit - Block based programming language and micro computer Using input and output commands Types of iteration Using sequencing and selection</p> | | | | <p style="text-align: center;">Topic</p> <p>Rur-ple programming - Simple text based programming, introduction to functions Using predefined functions Combining functions Creating custom functions</p> | | | | <p style="text-align: center;">Topic</p> <p>Data representation - Using different number systems to process, store and present information Converting between Binary, Denary and Hexadecimal values Carrying out binary addition Using logic gates and truth tables</p> | | | |
| Revision Resources | https://makecode.microbit.org/ https://makecode.microbit.org/tutorials | | | | https://rur-ple.sourceforge.net/en/rur.htm | | | | https://games.penjee.com/binary-bonanza/ | | | |
| Knowledge Organiser | Micro:bit | | | | Rur-ple | | | | Number Systems | | | |
| YEAR 8 | <p style="text-align: center;">Topic</p> <p>Flowol - Creating flowcharts (algorithms) to control given scenarios Understanding the flow of data Designing solutions using sequence, selection and iteration Modelling outcomes using "what if" scenarios</p> | | | | <p style="text-align: center;">Topic</p> <p>Website design - Creating a multimedia website Understanding the basic design concepts of websites, including layout and use of colour and target audiences Using specified tools to create a website.</p> | | | | <p style="text-align: center;">Topic</p> <p>Python programming - Advanced text based programming Re-introduction to basic programming constructs Using input and output commands Using sequence, selection and iteration Writing programs using the input, process, output structure.</p> | | | |
| Revision Resources | https://www.youtube.com/watch?v=KOiISYst7xE | | | | https://www.w3schools.com/howto/howto_make_a_website.asp | | | | https://www.w3schools.com/python/ https://codecombat.com/play | | | |
| Knowledge Organiser | Flowol | | | | Websites | | | | Python Programming | | | |
| YEAR 11 | <p>Architecture of the CPU Embedded systems, primary and secondary storage Programming fundamentals</p> <p>Computational thinking. Searching and sorting algorithms Practical programming skills</p> | <p>Operating and utility software. Ethical, legal, cultural and environmental issues Programming fundamentals</p> <p>Data types and casting Use of SQL Defensive design, validation and maintainability <i>Practical programming skills</i></p> | <p>Networks and topologies. Wired and wireless networks, protocols and layers. Programming fundamentals</p> <p>Boolean logic Types of languages Practical programming skills</p> | <p>Threats to computer systems and networks</p> <p>Testing and IDEs Practical programming skills</p> | Revision (Both exams in this half term) | | | | | | | |
| Revision Resources | https://senecalearning.com/en-GB/blog/free-ocr-computer-science-gcse-revision/ | | | | https://senecalearning.com/en-GB/blog/free-ocr-computer-science-gcse-revision/ | | | | https://senecalearning.com/en-GB/blog/free-ocr-computer-science-gcse-revision/ | | | |
| Knowledge Organiser | 1.1 System Architecture 2.1 Algorithms 1.2 Memory and Storage | 1.5 System Software 1.6 Ethical, Legal, Cultural and Environmental 1.2 Memory and Storage 2.3 Robust Programming | 1.3 Computer Networks 2.2 Programming Fundamentals 2.4 Boolean Logic | 1.4 Network Security 2.5 Programming Languages and IDEs | See previous half term knowledge organisers | | | | | | | |
| Exam Board Information | OCR Computer Science GCSE Specification | | | | OCR Computer Science GCSE Specification | | | | OCR Computer Science GCSE Specification | | | |