Computer Science: Curriculum Overview

Year 11

Half Term	Topic studied	What will I learn?	How will I be assessed?
Year 11 Autumn	Programming fundamentals (theory) Defensive design Testing Programming	Programming theory • Records to store data • Open, read write to a file • SQL search and sorting of data • Arrays • Sub programs (functions and procedures) • Random number generator Defensive design • Anticipating misuse • Authentication • Input validation • Maintainability • Naming conventions • House keeping styles used by software houses Testing • Types of testing (iterative and final) • Identifying types of errors • Selecting suitable test data (normal, boundary, invalid and erroneous)	Students are required to flip between Theory and Programming. One lesson will be on Theory, with the next lesson on Programming. After each unit is complete, pupils will be tested and a level is awarded. Student will also receive a programming test twice per term. A level is awarded (Mock Test)
Year 11 Spring	Boolean Logic Languages Programming	Boolean Logic • Simple logic diagrams using the operators AND, OR and NOT • Truth tables • Combining Boolean operators using AND, OR and NOT • Applying logical operators in truth tables to solve problems Languages • High and low level languages • Translators and their purpose • Compilers and interpreter characteristics	Students are required to flip between Theory and Programming. One lesson will be on Theory, with the next lesson on Programming. After each unit is complete, pupils will be tested and a level is awarded. Student will also receive a programming test twice per term. A level is awarded (Mock Test)
Year 11 Summer	The Integrated Learning Environment (IDE) Revision Programming	IDE • Editors • Error diagnostics • Runtime Environment Revision (course concluded) • Revisiting past papers • Exemplar answers • Programming questions • Revision techniques • Covering topics where pupils have struggled.	Students are required to flip between Theory and Programming. One lesson will be on Theory, with the next lesson on Programming. After each unit is complete, pupils will be tested and a level is awarded. Student will also receive a programming test twice per term. A level is awarded **Student would have covered all past papers by this stage**