

CURRICULUM OVERVIEW FOR YEAR 10 – GCSE COMPUTER SCIENCE

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	Pseudocode into Programming Data Structures	Pseudocode into Programming File Handling Subroutines and Functions	Logic Gates High/Low level languages Pseudocode into Programming	Programming Trace Tables Test Plans	Programming Skills – NEA Preparation	NEA Completion
Knowledge	Use of Pseudocode Data types in programming and pseudocode Use of lists and arrays in pseudocode and python 2-D arrays	File handling in pseudocode and python How to use functions	And, Or, Not gates and their use in circuits/computing Use of translators and compilers	Structure and use of trace tables Requirements of a test plan, test data values to use Efficiency of solutions	Validation of data entry, prevention of software failure	
Skills	Creating solutions to given problems Developing python solutions from pseudocode	Developing more complex solutions using external data files and functions in python, annotating code effectively	Drawing and using Logic gate diagrams and truth tables	Solving complex programming tasks with multiple requirements	How to undertake the NEA, use of framework for design of solution, development and testing	Application of skills learnt in completion of NEA
Key Marked Piece (Summative Assessments in bold)	Half term assessment on pseudocode	End of term assessment on pseudocode and computer systems	Half term assessment on pseudocode, logic gates and languages	End of term assessment on all topics to date	Half term assessment on data validation techniques	NEA is a formal part of the qualification (20 hour task)
Vocabulary	Binary, Hexadecimal, operators, constants/variables, strings, selection, arrays, lists, dictionary, tuple, append, extend, insert, slice, index	Input, output, storage, processor, arguments, parameters	AND, OR, NOT, logic, truth, Boolean, translator, compiler, interpreter, source code, machine code, assembly	Normal, boundary, erroneous, syntax error, logical error, efficient	Evaluation, improvement, structure, validation, error-prevention	

Valid for the academic year 2019-20 only