

What are the aims and intentions of this curriculum?

Students are to cover Python programming in much more in-depth than what they covered in year 8 as this is the start of their Computing GCSE. Students will cover more complex programming concepts and will use these skills to complete a variety of programming challenges and to complete a practice NEA. Students will then cover theory units such as representing data and hardware which forms part of the GCSE specification.

Term	Topics	Knowledge covered	Skills developed	Assessment
Autumn 1	Python Programming	Introduction to Python Variables Strings Integers Lists Append, extend and index IF statements Menus	Improving Python skills already learnt from the previous year. Students are to become much competent programmers and more comfortable with more complex tasks.	Python tasks
Autumn 2	Python Programming	Iterations (while loops, for loops, nested loops) Functions (procedures) Random function Time function File handling	Students will cover more complex programming skills using iteration, functions, built in functions and using text files and excel files to store data.	Written Python assessment
Spring 1	Python Programming	Flowcharts & Pseudocode Programming challenge booklet 1 Programming challenge booklet 2	Students will learn how to use flowcharts and pseudocode to plan a solution to a problem. The students will then complete a range of programming challenges using two booklets which increase in difficulty.	Programming challenges
Spring 2	Python Programming	Practice NEA Task OCR Programming challenges	Students will put their skills to use by working through a past NEA which was a previous live NEA. This will give students the ability to work through a GCSE NEA. Students will then work through the programming challenges set by OCR.	Practice NEA Document
Summer 1	Representation of Data	Data units Binary Images Hexadecimal Converting units of data Sound Instructions	Students will start looking into some of the theory within Computing by looking at how data is represented within computers.	Written assessment on representing data
Summer 2	Hardware	Input/Output devices Memory Secondary storage CPU Different hardware on a Computer	Students will look at the hardware that makes up computer systems and what their purpose is and how they work.	Written assessment on hardware