

Year 11 Computer Science Curriculum Plan							
Component 1	Core		Hinterland		NC Coverage	Assessment	Whole Education Opportunities
	Knowledge	Skills	Knowledge	Skills			
(Autumn Term 1 & 2)							
Subroutine	• Procedure • Function	• Defining procedure in programming • Using parameters in a procedure • Codes to call a function and capture the return value in a program	• The handling of refund request in supermarkets • Operations in a car assembly plant	• Analysing data on receipt based on system procedure • Assembling data on a given pre-determine procedure	• 4CC2 • 4CC3 •	• PLC • End of topic assessment • PR point assessments • Students to design a program given by AQA exam body	• Seneca website for blended learning
Representing algorithm	• Linear search and binary search • Bubble sort and merge sort	• Searching data using linear and binary search • Sorting data using bubble and merge sort algorithm • Calculating the median of a data set	• Understanding the entities in the database of Driver Vehicle Licensing Authority	• Searching and sorting of data with set of criteria such as car registration number or car make			
File handling	• Data structure • Text file • Csv file	• Creating text and CSV files • Appending data to the text and CSV files • Reading from the text and CSV file • Writing to the text and CSV files	• Understanding the concept of appending and reading of data in the context of a local GP Surgery	• Appending data to files in the GP surgery • Validation of records			
Fundamentals of data representation	• Binary arithmetic and hexadecimal • Images • Sound • compression	• Calculating binary additions and subtractions • Converting binary numbers to hexadecimal values • Calculating size of data to be stored on storage devices	• Operational concept of Internet service providers. • Data usage in the music industry	• Understanding MAC addresses and IP addresses in PC, mobile phones and other devices • Understanding of bits for data rate such as download			

		Representing images and sounds by bits		speed and internet connectivity			
(Spring & Summer Term) Revision of Content	Using AQA GCSE Specification - Workbook for the following: Paper 1 - Fundamentals of Algorithm - Programming Paper 2 - Fundamentals of computer networks - Impact of digital technology - Computer systems - Fundamentals of cyber security	- Taking notes - Designing programs using pseudocode - Debugging programs in python - Defining network securities - Identifying transport and network protocols.	- Revision strategies - Use of examiners report	- Making revision resources - Reflecting and making changes to work - Adapting new concept	4CC1 4CC2 4CC3	- PLC - End of topic assessment - PR point assessments	- SMSC- this encourages students, to explore and develop their thought pattern 5C's-character, confidence, communication, creativity and community