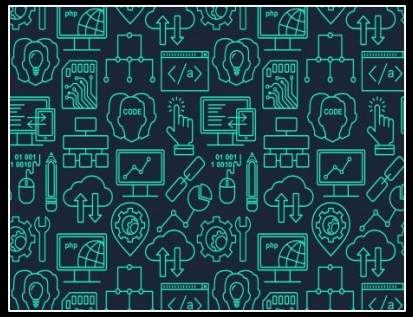
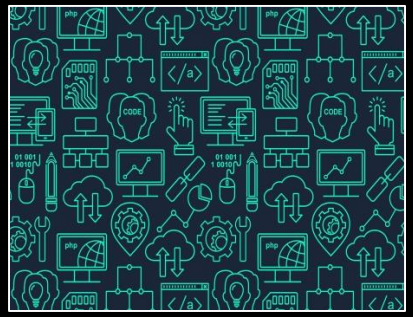


Computing & Business Faculty Curriculum Overview

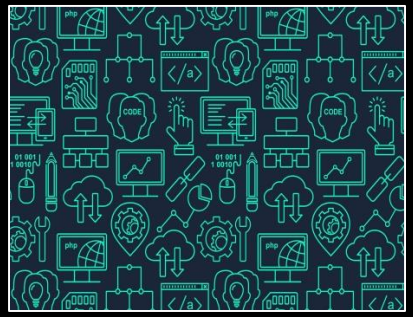
	Term 1 (September-December)	Term 2 (January-April)	Term 3 (April-July)
Yr 10	**New Skills** • Accessing OneNote independently • Writing sequenced instructions • Drawing Flowcharts using correct shapes & instructions • Writing pseudocode using correct vocabulary • Binary & Hexadecimal arithmetic (Shifts) • Use of programming constructs in Python (Input, Output, Variables, Data Types, Selection) to solve problems **Recalled Skills** • Writing instructions to solve a problem/task • Binary arithmetic (Conversions & addition) • Use of programming constructs in Python (Input, Output, Variables, Data Types, Selection) to solve problems **New Knowledge** • Naming parts of a computer • Components of a CPU and their purpose • Von Neumann Vs Harvard architecture comparison • Fetch execute cycle procedures and process • Embedded systems with examples • Difference between RAM & ROM • Types of secondary storage technologies • Characteristics of different storage technologies • Analysis of situations ad recommending suitable technologies **Recalled Knowledge (KS3)** • Names of internal components of a PC • Description of what happens during the fetch execute cycle • Name types of storage devices.	**New Skills** • Creating programmable code from written algorithms in the form of flowcharts and pseudocode. • Use of programming constructs in Python (Input, Output, Variables, Data Types, Selection, iteration, lists) to solve problems & create extended pieces of code • Inclusion of comments within code to identify purpose **Recalled Skills** • Use of programming constructs in Python (Input, Output, Variables, Data Types, Selection) to solve problems • Creating algorithms in the form of instructions, pseudocode or flowcharts **New Knowledge** • Different types of software & features • Functions of an operating system • Hardware used to create a LAN **Recalled Knowledge** • What an operating system and examples used in the world. • Use of memory by computer systems. • What is a computer network?	**New Skills** • Defensive design within coding and creating robust code **Recalled Skills** • Creating programmable code from written algorithms in the form of flowcharts and pseudocode. • Use of programming constructs in Python (Input, Output, Variables, Data Types, Selection, iteration, lists) to solve problems & create extended pieces of code • Inclusion of comments within code to identify purpose **New Knowledge** • Networking topologies – Description & comparison • Naming protocols and explaining where they are used in networking • The concept of layers and its advantages. • How to test code and review its effectiveness **Recalled Knowledge** • All of theory based content covered in year 10 through homework and revision is recalled. **Assessment:**



Computing & Business Faculty Curriculum Overview

	• What is binary and where is it used in computers. **Assessment:** Online quiz consisting of multiple choice, short/medium answer questions which will include a minimum 1/3 of questions related to previous content. Exam questions written in books culminating in a final score out of 80 for the half term.	• How binary is used to store and transmit all data **Assessment:** Online quiz consisting of multiple choice, short/medium answer questions which will include a minimum 1/3 of questions related to previous content. Exam questions written in books culminating in a final score out of 80 for the half term.	Online quiz consisting of multiple choice, short/medium answer questions which will include a minimum 2/3 of questions related to previous content. Exam questions written in books culminating in a final score out of 80 for the half term. Mock Examinations Completion of OCR programming project (TBC)

	Term 1 (September-December)	Term 2 (January-April)	Term 3 (April-July)
Yr 11	**New Skills** • Identify and discuss moral/ethical issues linked to the use of technology in a situation. • **Exam technique (Level of response questions)** **Recalled Skills** • Use of programming constructs in Python (Input, Output, Variables, Data Types, Selection, iteration, lists) to solve problems **New Knowledge** • Legislation in the UK which covers the use of technology • Environmental impacts of technology on the world both positive & negative **Recalled Knowledge** • Naming parts of a computer • Components of a CPU and their purpose	**New Skills** • Programming and controlling data sets using SQL • Use of programming constructs in Python (Input, Output, Variables, Data Types, Selection, and iteration, lists) in Low & high level languages (**Machine Code, Assembly Language, Python & Java)** **Recalled Skills** • Use of programming constructs in Python (Input, Output, Variables, Data Types, Selection, and iteration, lists) to solve problems. • Creating algorithms in the form of instructions, pseudocode or flowcharts • Testing & improving code to improve efficiency **New Knowledge** • The purpose of SQL & its commands • Sorting algorithms	**New Skills** • Exam technique **Recalled Skills** • Exam technique (Level of response questions) • Creating algorithms in the form of instructions, pseudocode or flowcharts **New Knowledge** • Exam techniques & command words **Recalled Knowledge** • Naming parts of a computer • Components of a CPU and their purpose • Von Neumann Vs Harvard architecture comparison • Fetch execute cycle procedures and process • Embedded systems with examples • Difference between RAM & ROM • Types of secondary storage technologies • Characteristics of different storage technologies • Analysis of situations ad recommending suitable technologies



Computing & Business Faculty Curriculum Overview

	• Von Neumann Vs Harvard architecture comparison • Fetch execute cycle procedures and process • Embedded systems with examples • Difference between RAM & ROM • Types of secondary storage technologies • Characteristics of different storage technologies • Analysis of situations ad recommending suitable technologies • Types of software & their features. **Assessment:** Online quiz consisting of multiple choice, short/medium answer questions which will include a minimum 1/3 of questions related to previous content. Exam questions written in books culminating in a final score out of 80 for the half term. Mock Examinations	• Searching algorithms • Types of programming languages • Types of translators **Recalled Knowledge** • Commands for programming languages • Shapes used in flowcharts **Assessment:** Online quiz consisting of multiple choice, short/medium answer questions which will include a minimum 1/3 of questions related to previous content. Exam questions written in books culminating in a final score out of 80 for the half term. Mock Examinations.	• Types of software & their features. • Different types of software & features • Functions of an operating system • Hardware used to create a LAN • Networking topologies – Description & comparison • Naming protocols and explaining where they are used in networking • The concept of layers and its advantages. • Sorting & Searching algorithms • Binary & hex arithmetic • Logic gates & truth tables • How binary is used to represent a range of data **Assessment:** Past exam papers and questions which are peer marked or teacher marked.