Computer Science and **Digital Information Technology**
Year 8 curriculum map

Year 8	T1	T2	T3	T4	T5	T6
Content / Topic for Term	**Games programming in Scratch** *Design and program computer games*	**Spreadsheet modelling** *Develop and test models*	**Graphics** *Discover bitmap and vector graphics*			
Key Knowledge for acquisition, recall and application in assessment or exam	Students begin this unit with an introduction to the Scratch programming environment, and by reverse-engineering some existing games. They then progress to planning and developing their own game, learning to incorporate variables, procedures (using the Broadcast function), lists and operators. They	A basic knowledge of spreadsheets includes cell references, simple formulae and formatting, the work is centred around creating a model for what makes a good breakfast. Students start by looking at different types of model and then use basic spreadsheet techniques to create and format a simple spreadsheet to	This is an introduction to graphics and graphic file types. The unit explores how bitmap and vector images are represented and stored by the computer. There is also opportunity for students to practise skills in design, photo editing and image manipulation using layers in a suitable graphics package.			

	should be able to create a fully working game with lives, scoring and some randomisation of objects. Finally, they will learn to test and debug their programs.	calculate if they are having a healthy breakfast. The model introduces the concept of 'what if' scenarios. Finally, the students create a seat booking system to book seats and calculate income from seat sales.				
Key skills to apply in assessment or exam	A project to assess the development process of designing and programming a unique, end-user focused, game using the various components of Scratch: design, development, testing, and evaluation.	Spreadsheet features covered include SUM, MAX, IF and COUNTIF functions, cell naming, conditional formatting, validation, charting and simple macros.	Graphics features will include masks, montages, editing and manipulation of images. Images will also be created from start to finish using many different features of the design software.			
Title of Knowledge Organiser						