Year 8 IT and Computer Science

Digital graphics – gives students the opportunity to undertake creative projects using existing digital artefacts as well as creating their own. Students will be taught how images are represented digitally and the difference between different image file types (and their uses).
Text programming – students will build up their programming skills by text-based programming, learning about the different data types, selection, iteration, lists and functions and will use these skills to solve a variety of computations problems including designing their own programs.
Desktop Publishing skills – students will learn how to create several business products for a given business scenario, building on their IT skills from Year 7.
Kodu – students will be introduced to visual programming via Kodu, using this they will produce, plan and evaluate a series of games.

Methods of deepening and securing knowledge:	
Retrieval practice	Starter activities are used whilst students login to computers, these are knowledge retrieval activities.
Interleaving	Programming skills are revisited several times in Year 8. Key concepts are repetitively covered using different language and are interleaved within the curriculum.
Concrete examples	Concrete examples are used as the Teacher demonstrates completed projects or tasks in creative or practical lessons to demonstrate how the skills taught can be applied to different scenarios.
Dual coding	Dual coding is used as instructions for tasks including written steps and images showing what icons or tools look like.

	Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
Topic(s)	**Digital graphics** - Binary image representation - Bitmap and Vector images - Image file types - Photoshop skills - Creating, reusing and revising digital artefacts for a given audience	**Text programming with small basic language** - Introduction to text based programming - Selection and iteration	**Text programming with small basic language** - Solve computational problems - Assessment	**DTP/business products** - House styles - Business logos - Business card - Leaflet - Audio editing	**DTP/business products** - Audio editing - Website design - Assessment **Kodu** - Creating landscapes	**Kodu** - Programming with Kodu - Paths and enemies - Shooting - Plan own game - Create own game
Assessment	- Conveying meaning analysis	- Movie poster	- Small basic assessment	- DTP documents	- DTP documents	- Game planning

CEIAG *(Careers that are linked to that topic)*	- Graphic Designer	- Computer programming - Software Developer	- Computer programming - Software Developer	- DTP designer - Digital content lead	- Web Designer - Web Developer	- Game Designer

Independent Learning:
Independent learning extends the learning in the classroom with tasks including reading technology news, articles or research or researching and finding materials online to be used in the next lesson.