KS3 curriculum map

|  | **Topic** | **Key concept – what do I want the students to learn from this unit?** | **What knowledge will they acquire?** |
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|  **YEAR 8 OVERVIEW** |
| **Unit 1**  | **Digital Imaging** | That although technology allows a large amount of poetic license when it comes to taking an original image and manipulating it to fit their own requirements, that the student has to do this with the full knowledge that they haven’t to deceive their audience or create a false impression. | * Understand what is involved in selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users
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| **Unit 2 -**  | **Text Programming** | What are the main programming constructs needed to develop a computer program using Python | * Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions
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| **Unit 3**  | **Programming with Kodu** | How to design, program, test and evaluate a game for a specific purpose and audience | * Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems
* Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problems
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| **Unit 4**  | **computer networks** | Students need to understand what a network is, the difference between a LAN/WAN and the difference types of network topologies | * Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems
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