

Computing, IT, Business and Economics Faculty
Curriculum Map for KS3 Computing and IT

Year 9

| | |
|----------------------------|---|
| Statement of Intent | <i>Students build on their Computing skills by extending their digital creativity opportunities and developing coding using physical devices.</i> |
| Term 1 | <p>Topic: Faking It! Image Manipulation Students are shown examples of faked imagery, provided with a forum to discuss the implications of falsified pictures and video, then taught how to use Photo editing software to apply their own subtle adjustments. In creating their own fake images, using Serif PhotoPlus, students learn to be wary of trusting imagery from all sources. Homework: Itslearning literacy self-marking task “T1 – The Advantages and Disadvantages of Photo Manipulation”.</p> |
| Term 2 | <p>Topic: Algorithms 2 Flowcharting skills, first begun in Term 4 of Year 7 are revisited with variables used to count and subroutines an essential part of completing the virtual scenarios. Students gain an understanding of how to construct more advanced algorithms to achieve predefined outcomes. Homework: Itslearning literacy self-marking task “T2 – Algorithms 2”</p> |
| Term 3 | <p>Topic: Data Representation The binary number system (base 2) is introduced, as is the ASCII Character set and methods of cryptography. Binary addition and the digital representation of sound are also taught to students. Homework: Itslearning literacy self-marking task { Data Representation }</p> |
| Term 4 | <p>Topic: Cyber Security Interactive Multimedia Product Virus, Malware, Keyloggers and other dangers to data security are identified then added to a presentation, with the importance of practical steps being reiterated such as secure password management, operating anti-virus software effectively and maintaining a backup. Homework: Itslearning literacy self-marking task “T3 - Cyber Security”</p> |
| Term 5 | <p>Topic: Python (Loops and Lists) Building on the Year 7 Python introduction, students describe and create a While loop; use the range function to control the For loop; factor in number of iterations; sort data and append items to a list. Homework: Itslearning literacy self-marking task “T5 – Huge Tech Companies that use Python”</p> |
| Term 6 | <p>Topic: Databases Pupils explain what a database is; identify keywords associated with databases and recognise different data types. Databases are queried, interrogated and sorted to generate the appropriate results. Forms are created and adapted to suit individual records. This Homework: Itslearning literacy self-marking task {Databases}</p> |