**Curriculum Overview for Computer Science**

**Year 11**

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| **Half Term 2**  **Python Progamming**  **Substantive Knowledge:**  This unit prepares students for programming in further education and in future jobs as programmers, debuggers and more.  The unit teaches students how to create basic programs, use IF statements, WHILE and FOR loops, Maths and operators, use random to pick an item randomly, use lists, tuples and dictionaries. 1D, and 2D lists, numeric arrays, functions and using text files alongside Python.  **Disciplinary Knowledge:**   * Basic programs looking at print statements * Looking at how IF statements work in programs * How to manipulate strings (upper case, lower case) * Maths and the operators used (AND, OR, <, >, <=) * FOR loops and checking for something in range * WHILE loops displaying WHILE a condition is met * RANDOM function picking something at random * Tuples and dictionaries -how they differ from lists * Arrays with numbers rather than strings * 1D and 2D lists for storing data * Reading, Writing and editing text files   Functions in Python to save program code | Books | Model reading  Reading out loud  Skim and Scan of source information  Decoding terms  Etymology of key terms |
| Speech | IF  WHILE  FOR  OR  AND  String  Random  Tuple  List  Dictionary  Function  Statement  Loop |
| Checklist RTL | **Formative assessment**  Knowledge checks  Quiz  Practice questions  **Summative assessment**  End of unit assessment |
| Home | Practice questions  Revision tasks  Research tasks |