KEVICC KS3 Curriculum:	Subject: Computer Science	Key terms and vocabulary.
Year: 9 Term: 1	Topic: Program Design	*Which words will be explicitly taught & how frequently will understanding be checked? How will assimilation of new vocab be checked?* **Abstraction** **Decomposition** **Algorithm** **Flowchart** **Pseudo code** **Authentication** **Integer** **Real/Float** **String** **Selection** **Boolean operator** **Iteration** **Definite iteration** **Indefinite iteration** **Validation** **Lists** **High level language** **Low level language** **Translator** **Compiler** **Interpreter** **Syntax error** **Logic error** **Runtime error** Used in context during lessons and understanding checked in end of unit assessment

What is the essential knowledge from this unit? ***What do students need to remember and understand?***

- Understand the terms Abstraction, Decomposition and Algorithm
- Understand that Algorithms can be expressed as Flowcharts or in Pseudo Code
- Be able to write simple programs from given pseudo code
- Be able to write a simple user authentication program (username/password)
- Be able to write simple programs to process numeric inputs (integer, real)
- Be able to write simple programs to process text inputs (string)
- Understand what selection is and how it is used in programming
- Be able to write programs that make use of selection
- Understand Boolean operators and use them in selection expressions
- Understand what iteration is and how it is used in programming
- Understand the difference between definite and indefinite iteration
- Be able to write programs that make use of count controlled iteration
- Be able to write programs that make use of condition controlled iteration
- Be able to write programs that generate and use random numbers
- Be able to add validation to user input to check it is acceptable
- Understand how lists can be used to store data items for easy processing
- Be able to write programs that process data stored in lists
- Understand difference between high and low level programming languages
- Understand that all programs must be translated to machine code to run
- Understand the different types of translators and how they work
- Be able to describe the three different types of errors in computer programs

What prior learning supports understanding of this content?	How does this content link to future learning?
• Year 8 unit on text-based programming	• Essential learning for students going on to take GCSE Computer Science course

Reading: *Where in the unit are students supported to read complex academic text?*	**Writing:** *Independent writing tasks and how they are structured*
• Students will be directed to read age-appropriate content from BBC Bitesize pages and other relevant online sources	• Short written answers to worksheet questions

Key assessments:
How will students review the information learned?
How will feedback be seen?

- Students will get short personalised feedback (mainly verbal) on individual tasks
- End of unit assessment in penultimate lesson, with final lesson used to give feedback and enable corrections/improvements