Northolt High School
Scheme of Learning

Computer Science

Year group: 13	Term: 2	Unit duration: 6	Number of lessons: 15	Unit title: Revision - Data Structures and System Software

Assessment outcome: To be able to answer exam questions about the Data Structures and System Software	**Fertile question?** How can we use abstract data structures to organise data within a program? How does system software manage system resources and help computer systems operate?

Key skills/concepts/knowledge that students should cover	**Start RAG**	**End RAG**	**Literacy. Key vocabulary/subject terminology that students should cover**
Abstract data structures - trees, graphs Linear data structures - stacks and queues Traversal algorithms, and how to find items in an abstract data structure Efficiency of data structures - how the structure of data, and the ways in which we access it, can affect the performance of a program Types of operating systems Types of applications and their uses Programming language translators and interpreters Utility software such as compression software Embedded systems			Trees Graphs Stacks Queues Traversal Pop Push Efficiency OS Utility software Embedded systems Translators Interpreters
Stretch. Key skills/concepts/knowledge that students should cover Incorporate an abstract data structure into a program to organise complex data sets - create a family tree program in Python where a user can add, remove and change elements as they discover more about their heritage.			**Suggested materials teachers could/should use** **TeachICT** **Computer Science Powerpoints/Worksheets** **Key home learning tasks students should complete** Answer exam questions about the revision topics under exam conditions.