Northolt High School
Scheme of Learning

Year group: 11	Term: 1	Unit duration: 6 weeks	Number of lessons: 6	Unit title: Algorithms - Sort and Search

Assessment outcome: To understand how common search and sort algorithms work	Fertile question? How do we sort a list into numerical or alphabetical order, and how do we find a specific item in that list?	
Key skills/concepts/knowledge that students should cover	**Start RAG**	**End RAG**
Sort algorithms - organising a list of values Bubble sort vs insertion sort Implementing bubble sort in Python Search algorithms - finding an item in a list Linear search vs Binary search Implementing search algorithms in Python Search and sort algorithm efficiency		

Literacy. Key vocabulary/subject terminology that students should cover
Bubble sort Insertion sort Linear search Binary search Efficiency Big O notation

Stretch. Key skills/concepts/knowledge that students should cover	
Write a python program for sorting a list where the user can select which type of sorting algorithm they wish to use to compare completion time. Do the same for searching algorithms.	

Suggested materials teachers could/should use
TeachICT Computer Science Powerpoints/Worksheets
Key home learning tasks students should complete to be set in lessons.