Key Vocabulary for Spring Term Overviews

Subject: Computer Science	**Year Group: Y13**
Key Learning Points/End Points	**Key Vocabulary**
Algorithms	**Algorithms** – a list of rules to follow in order to solve a problem. **Big O notation** - a mathematical notation that describes the limiting behaviour of a function when the argument tends towards a particular value or infinity. **Polynomial** - is a chain of algebraic terms with various values of powers. **Stacks** - a stack is an abstract data type that serves as a collection of elements, with two main principal operations: Push, which adds an element to the collection, and Pop, which removes the most recently added element that was not yet removed. **Queues** - a queue is a collection of entities that are maintained in a sequence and can be modified by the addition of entities at one end of the sequence and the removal of entities from the other end of the sequence. **Trees** - is a nonlinear data structure, compared to arrays, linked lists, stacks and queues which are linear data structures. **Linked lists** - a linked list is a linear collection of data elements whose order is not given by their physical placement in memory. Instead, each element points to the next. **Depth-first** - is an algorithm for traversing or searching tree or graph data structures. **Bubble sort** - is a simple sorting algorithm that repeatedly steps through the list, compares adjacent elements and swaps them if they are in the wrong order. **Insertion sort** - is a simple sorting algorithm that builds the final sorted array one item at a time. **Merge sort** - is an efficient, general-purpose, and comparison-based sorting algorithm. **Quick sort** - is a Divide and Conquer algorithm. It picks an element as pivot and partitions the given array around the picked pivot. **Dijkstra's shortest path algorithm** - is an algorithm for finding the shortest paths between nodes in a graph, which may represent, for example, road networks.