





## Key Vocabulary and Definitions

	Meaning
Algorithm	A set of reusable instructions written in code that a computer follows, allowing it to carry out a task
Sorting algorithm	A set of instructions used for sorting different pieces of data in to order
Searching algorithm	A set of instructions used for searching for a piece of data
Bubble sort	A sorting algorithm that works by comparing pairs of data, swapping them in to the correct order and repeating this process until the data is completely in order
Binary chop / binary search	A searching algorithm that works by chopping a list in half until the target is found. It finds the median in a list of data and compares this to the target to work out if the target is in the top or bottom half of the list
Exponential complexity	The time taken for an algorithm to run doubles each time a new piece of data is added
Logarithmic complexity	The time taken for an algorithm to run increases as data is added
Image recognition	An algorithm that can identify features inside an image by matching patterns and existing images
Linear search	A searching algorithm that works by comparing items in a list to a target one by one until the target is found or the end of the list is reached
Binary / Boolean	Binary is the counting system that all computers are based on. A BASE-2 number system, it only has the digits 0 and 1; these can be used to represent the two states of switches (off and on). Boolean is a set of logical rules that can be applied to binary data to build electrical circuits and code
Digit	A single number that makes up part of a number system
Number	A number comprised of one or multiple digits, with the value being indicated by the position of each digit
Encoding	The process of turning analogue data in to binary 0s and 1s to be stored by and represented by a computer
Pixel	An individual dot that is used to make up part of a digital image or display
Colour depth	The number of binary bits given to each pixel in an image or display for colour information. The higher the colour depth, the more realistic the image will appear
Run length encoding	A compression method that can make files smaller by removing repeated information and leaving a marker in its place so the computer is able to put the information back when needed
ASCII	American Standard for Character Information Interchange is a <u>standard</u> used for encoding characters (letters, punctuation, symbols etc.) as binary numbers
amplitude	The height of a sound wave at a given point
Sample	The process of encoding sound by measuring the amplitude of a sound wave at set intervals and storing that measurement as a binary number