Broughton Hall Catholic High School **Key Stage 3 Descriptors**

Computing - Year 7

	Emerging	Developing	Secure	Exceeding
Hardware, Software & Processing	Knows how to identify some examples of input, output and storage devices. Knows some of the internal components of a computer. Knows some examples of network devices. Knows that there are different types of software.	Understands that input, output and storage devices are essential parts of a computer system. Understands that there are many networking devices that work together to allow a user to access a network. Understands the difference between application software and systems software.	Recognises and understands that a computer can take input, process and store that inputted data and can output that data. Understands that there are two categories of system software and knows the functions of some of them.	Understands the CPU's relationship with RAM, secondary storage, input and output devices. Understands that computers can only interpret data and instructions when converted to binary/machine code.
Computational Thinking/Algorithms	Knows that a computer thinks in a certain way. Knows that we can use flowcharts to plan computer programs. Knows that a computer uses different methods to sort data.	Understands that there are four pillars of computational thinking. Understands that a flowchart or pseudocode is used to plan a computer program. Knows that a computer occasionally uses a bubble sort to sort data.	Understands how to apply decomposition and abstraction to solve a problem. Can create their own pseudocode or flowchart when planning a program. Can carry out a simple bubble sort.	Can understand and write flowcharts and pseudocode to solve a problem. Understands that bubble sorts can be programmed to sort lists of data.
Data Representation	Knows that computers use the binary number system in some	Understands how to convert 4 digit binary numbers to decimal.	Understands how to convert decimal numbers to 4 digit	Understands that humans use the base$_{10}$ number systems,

	way.		binary numbers.	whilst computers use base$_2$.
Programming	Knows that there is a programming language called small basic. Knows that when you type certain instructions, a small basic program will perform a task.	Understands how to create a small basic program that outputs a message to a user, takes input, stores that input in a variable (memory). Understands that placing lines of code in a small basic program in order is known as sequencing and if it's done incorrectly, the program won't work.	Understands and can create small basic programs that use selection. Knows that selection in small basic is used to make decisions based on user input.	Can understand and write small basic code that includes iteration. Understands when to use count controlled iteration (for loops) or condition controlled iteration (while loops).
IT	Knows how to create a folder and save a file. Knows that software files have file extensions. Knows how to search on Google. Knows that applications software (apps) are used on computers. Knows that you can use spreadsheets and databases to organise data/information.	Understands that creating folders and files with sensible names keeps files organised and helps the user to find them later. Understands that different applications software has different extensions (suffixes). Understands how to use the WWW to search for information. Understands how data entered into a spreadsheet can be manipulated using formulae.	Understands that folders can have sub folders which keeps files more organised. Can identify different file types by their file extension. Understands the reason why we use relations in databases and can understand the use of functions used in a spreadsheet.	Understands that files can be saved in the cloud as well on secondary storage. Understands how to search on different websites and takes account of reliability and bias. Understands why we need to use relationships to create complex queries in a database
Digital Literacy	Can login to some of the school IT systems, without any help.			

	Knows how to research how to stay safe online.			