



KS3 Information Computing

YEAR	TRINITY 2	MICHAELMAS 1	MICHAELMAS 2	LENT 1	LENT 2	TRINITY 1
7		<p>Collaborating Online Respectfully</p> <p>In this unit pupils will be introduced to the network and how to use it safely. Pupils will consider what makes an effective password and will investigate safe and appropriate use of the internet and social media.</p>	<p>Using Media; Gaining Support For A Cause</p> <p>Pupils will develop their understanding of information technology and digital literacy skills. Pupils will develop software formatting skills and explore concerns surrounding the use of other people's work, including licensing and legal issues.</p>	<p>From Semaphores To The Internet</p> <p>In this unit pupils will explore the growth and use of computer networks including the benefits of networking and how data is transmitted across a network using protocols</p>	<p>Programming Essentials Part 1</p> <p>This unit allows pupils to develop their programming skills using a block based programming language. The main programming concepts covered in this unit are sequencing, variables, selection, and count controlled iteration</p>	<p>Programming Essentials Part 2</p> <p>Pupils will continue their programming journey by creating their own subroutines, developing their understanding of decomposition. Pupils will learn how to create lists before independently applying their skills to solve a given problem.</p>
8	<p>Modelling Data: Spreadsheets</p> <p>Pupils will be introduced to spreadsheet modelling in this unit of work. They will investigate the use of formula to analyse and manipulate data, visualising the results through the use of charts.</p>	<p>Computing Systems</p> <p>Pupils will develop an understanding of a how computer works in this unit, from programs and the operating system, to the physical components that store and execute these programs. Pupils will also be introduced to the concept of binary representation.</p>	<p>Data Representation <i>(Binary, Binary Addition, Representing Images)</i></p> <p>In this unit of work pupils will develop their understanding of binary representation and how computers use binary to perform tasks and display text, numbers and images.</p>	<p>Introduction To Python</p> <p>Pupils will develop their knowledge of programming through the introduction of text based languages. Pupils will focus on input and output, arithmetic, random, selection and iteration.</p>	<p>Further Data Modelling</p> <p>During this unit of work pupils will further their knowledge and understanding of spreadsheet modelling.</p> <p>Learning will focus on the use of conditional formatting, charts, drop down boxes, count, VLOOKUPs and IF statements.</p>	<p>Developing For The Web</p> <p>During this unit of work pupils will learn how to build basic websites using HTML coding. Pupils will go onto to develop websites using CSS style sheets considering how design impacts on the user experience.</p> <p>Using knowledge sought from history lessons about the Holocaust, pupils will design and build a web page prototype to demonstrate their understanding of the Holocaust.</p>
9	<p>Media: Vector Graphics</p> <p>In this unit pupils will develop an understanding of how vector graphics are created and where they are used.</p> <p>Pupils will use this knowledge to create their own vector graphics to meet a given need.</p>	<p>Spreadsheets, Data Science & Business</p> <p>Pupils will investigate the use of big data in this unit, how it is collected and the benefits and drawbacks of different data collection methods.</p> <p>Learners will be exposed to both global and local data sets and gain an understanding of how visualising data can help with the process of identifying patterns and trends.</p>	<p>Computational Thinking & Python</p> <p>In this unit pupils will build on their knowledge of year 7 and 8 programming by investigating how data can be represented and processed in sequences, such as lists and strings</p>	<p>Representations: Going Audio Visual</p> <p>Pupils will focus on making digital media such as images and sounds, and discover how media is stored as binary code.</p>	<p>Cybersecurity</p> <p>Pupils will develop an understanding of what threats our data might be exposed to, including malware, social engineering and hacking. Pupils will investigate the impact a cyber-attack can have on an individual and how we can minimise the risk of such attacks.</p>	<p>Digital Wellbeing</p> <p>Pupils will develop their knowledge of internet safety within this unit, pupils will investigate the use of image editing and the impact this and the over use of social media and the internet can have on emotional wellbeing.</p>