



Term	1	2	3	4	6	5
Topic Title	Introduction to IT/Computing at SJN, basic understanding of the computer	Social Media awareness and Computational Thinking	Suitable passwords. Creating a website for a specific audience	Spreadsheet model. Revision and Assessment	Programming using Scratch and Micro bit	How the web works
Rationale	Learners will be introduced to the SJN network being issued with usernames and passwords in order to access the network and set up their file management system; they will be made aware of the rules for safe and acceptable working practices as detailed in the Acceptable Use Policy. The next stage is to be taught how to use the Office365 utilities to enable learners to access the whole school curriculum. Using the North Lincs Social Media Charter learners will explore the positive and negative aspects of social media; it is important to deliver this early in the academic year as young people may begin to use mobile and online communications more independently as they begin secondary education. It is recommended that this is visited regularly as new developments emerge. Learners will be introduced to the main components of a standard computer system, this will give them a basic understanding of the input, process, output cycle of data. This is followed by a brief history of computing to allow learners to appreciate that computing is the processing of data and how this has developed through the ages.	Using the theme 'Speed Friending' learners will explore social media and how young people can safely make friends and communicate. They will carry out a role play identify what is safe friending and risky behaviours. Learners are introduced to the binary number system, they will be taught that this is how computers store data. Using a conversion table learners will be taught how to convert between Base10 and Base2; more able learners may explore Hexadecimal and be able to do simple conversions. What is an algorithm? Using Computational Thinking learners will explore the process of breaking down a problem using Decomposition, Pattern Recognition and Abstraction in order to be able to write an Algorithm to resolve the problem.	Learners will explore the importance of suitable passwords and their role in keeping data and information secure. They will suggest/ be taught what makes a good password. Learners will design, implement and evaluate a multiple page website. They will learn about what makes a good website e.g. colours, fonts, layout, navigation, audience and purpose. Using storyboards and sketches learners will design the individual webpages, the designs will then be implemented using a range of tools and techniques available in WIX.	Learners will be introduced to spreadsheet software to allow them to create a spreadsheet model looking at different scenarios. Learners will need to be taught how to set up a spreadsheet, formatting, simple formulae/functions to perform calculations and hyperlinks. Learners to reflect on learning to date. Formal assessment.	Learners will undertake a series of tasks within the theme of Cyberbullying. They will begin to understand the difference between what is called 'banter' and what is 'bullying.' Learners will look at the issue from each gender type to help them gain better understanding. Programming will teach learners how to sequence instructions for specific outcomes. Learners are encouraged to test their scripts and modify it to meet the demands of the task. Learners will be able to transfer the skills to create games to meet their own specifications. Learners are introduced to the MICRO BIT, they will be presented with opportunities to develop code using precise instructions, compile and flash the code to a device. As learners increase in confidence they will be able to create more creative and challenging programs.	Year 7 will learn that the Internet is a global resource that comprises of millions of connected computers and it is this infrastructure that hosts the World Wide Web. Learners will be introduced to Boolean operators to enable them to refine criteria to make searching for information more efficient. They will look at URLs and the different elements that identify the web address and how to ensure they work appropriately by acknowledging sources.
Prior knowledge	Learners will have varying experiences of IT and Computing depending on the primary provision, however it is assumed that learners will have encountered some type of computerised equipment.	It is assumed that learners will have some E-Safety knowledge from primary school and are aware of the most common social media platforms. To access the Binary work learners will need to know that we use a base10/decimal system in everyday life. To access the work on Algorithms learners will require a reasonable level of literacy.	This will build on the learning at the beginning of the academic year when learners were issued with username and passwords. To access the Binary work learners will need to know that we use a base10/decimal system in everyday life. To access the work on Algorithms learners will require a reasonable level of literacy.	This is an opportunity to revisit all prior learning.	Some learners may have experienced some basic Scratch lessons at primary school; however the unit of work begins with basic instructions/ recap. Scratch is a valuable stepping stone for learners prior to starting work with the Micro bit.	It is assumed that learners will know what a webpage is and will have accessed various websites both in and out of school.
Key knowledge/skills development	Learners will independently log into the SJN network to access a range of resources, they will work safely following the H&S guidelines. Learners will have a basic knowledge of what computing is and can name the input and output devices connected to a standard PC.	Learners will be able to make informed choices when using social media, they will be equipped with the knowledge of how to identify risky behaviour and how to report their concerns. Year 7 will use their new learning to 'crack' binary codes by using simple number conversions. Learners will be able to break down a problem by identifying the key information, using what they have learned they will write a simple plan/ algorithm to create a solution.	Now that learners have had access to SJN Computing facilities both at school and home they will appreciate the need to keep data and information secure. Creating a website will help learners develop an awareness of audience and purpose and the need to have this at the forefront when designing any digital content; they will also understand that a website must be easy to navigate to retain the user interest.	Learners will build their confidence of using spreadsheets, something many of them will never have used before. Students will be able to construct formula using the correct formulas / functions so they can understand how the use of spreadsheets can increase productivity. Consolidate all skills/ knowledge acquired throughout the year.	Learners will develop their logical thinking and problem solving as they design and create short sequences to control an on screen avatar or external device.	Learners will gain a better understanding of the enormity of the Internet and the WWW. They will be able to search more efficiently using AND, OR, NOT; this will provide an opportunity for learners to see how data travels across the Internet to be delivered to their computer.
National Curriculum/ specification links	Know that computers collect data from various input devices and process this to output information. Understand the difference between hardware and software. Uses technology with increasing independence to organise workspace and digital content.	Knows how to be responsible online (good netiquette) and how to report concerns and protect their own online identity; recognises ethical issues surrounding IT beyond school. Knows that digital computers use binary to represent all data. Understands that algorithms are implemented on digital devices as programs; can design simple algorithms	Recognises the audience when designing and creating digital content. Collects, organises and presents data and information in digital content.	Collecting and analysing data, creates digital content by combining software applications and internet services. Makes judgments about data, perform formula and functions	Learners will create programs that implement algorithms to achieve given goals, they will assign and use variables and operators within a loop and to terminate a program.	Identifies the difference between the Internet and Internet services. Is able to effectively use search engines and understands simple Boolean logic [for example, AND, OR and NOT]. Is able to select and use Internet services.
Literacy	Researching key figures throughout the history of computing through online extracts and writing up their contributions in their own words.	Exploring the root words behind the different number systems, Hexadecimal (16), Binary (2) and Denery (10) and how those words describe the number systems.			Writing scripts for conflict resolutions.	Boolean operators and how a statement can be phrased in such a way that it can be either true or false.
Numeracy		Binary, Denery and the concept of different number systems.	Relating the size of individual elements on a webpage, links to percentages and ratios.	Automating and performing calculations using excel code	The relationship between high level code and the binary code that the processor uses.	Boolean operators and logical statements.
STEM	Understanding and following rules for safe working conditions. Using office software in both an individual and group context.	Evaluating problems and coming up with creative, logical, solutions in the form of algorithms.	Password standards and safety. The creative design process, specifically relating to websites.	Making efficient use of spreadsheet software by analysing problems and creatively coming up with solutions.		Finding and citing reliable sources by critically evaluating relevant articles on the internet.
Cross curricular links	Close links with Technology in relation to safe working practices.	Appropriate and safe use of social media has close links with PSHCE/Citizenship. Working with number systems, conversions, addition and subtraction links with Maths.	Audience and purpose links with Technology.	Calculations will link with maths	Logical thinking and programming languages has close links with Maths and MFL.	This topic links with most subjects in respect of finding and using appropriate web resources.
Key vocabulary	Network, password, secure, social media, input, output, process, banter, trape, catfish	Social media, platform, report, appropriate, binary, denary, convert, algorithm, problem, decomposition, pattern recognition, abstraction, solution	Secure, hacking, audience, purpose, layout, fonts, navigation.	Formula, function, formatting, pull handle	Code, sprite, script, loop, variable, avatar, sequence, compile, flash,	Internet, Server, Web browser, Network, World wide web, Hypertext Mark-up Language, Protocol