



Learning Aims and Curriculum Intent:

Algorithms – Be able to comprehend, design, create, and evaluate algorithms. Computer networks – Understand how networks can be used to retrieve and share information, and how they come with associated risks. Computer systems – Understand what a computer is, and how its constituent parts function together as a whole. Design and development – Understand the activities involved in planning, creating, and evaluating computing artefacts. Effective use of tools – Use software tools to support computing work. Impact of technology – Understand how individuals, systems, and society as a whole interact with computer systems. Programming – Create software to allow computers to solve problems. Safety and security – Understand risks when using technology, and how to protect individuals and systems.

Term	Content, Key Questions and Knowledge	Skills	Assessment
Michaelmas	<p>Office365 productivity skills</p> <p>Use of OneDrive, OneNote, Teams and Outlook to perform common tasks necessary for effective learning. To gain an appreciation for good working practices using the above productivity tools.</p> <p>Impact of Technology – Collaborating Online Respectfully</p> <p>Can I become a responsible digital citizen?</p> <p>A primer for learners on how to use the school network appropriately. This unit builds in time for teacher-led discussions on why appropriate usage is important, as well as allowing for opportunities to highlight online safety issues, and learners get the opportunity to use digital skills to work collaboratively on a presentation on cyber bullying.</p> <p>Word Processing and PowerPoint</p> <p>Using Word and PowerPoint to create products. To utilise a variety of skills to improve the appearance, accessibility and creativity of products created using these tools.</p>	<p>Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability.</p> <p>Understand a range of ways to use technology safely, respectfully, responsibly and securely</p> <p>To be confident using a range of common applications to perform basic to intermediate tasks.</p>	<p>A group presentation with a clear set of marking criteria.</p> <p>Participation in class-based discussion.</p> <p>Practice tasks using techniques such as creating citations, formatting, and image manipulation.</p>
Lent	<p>Modelling Data – Spreadsheets</p> <p>Can I turn data into information?</p> <p>An introduction to the wonderful world of spreadsheets and the concept of cell referencing. Pupils will collect, analyse, and manipulate data, before turning it into graphs and charts.</p> <p>Networks: from semaphores to the Internet</p> <p>How does a website get to my phone? Imagine a world without computer networks: there would be no more YouTube, Google, instant messaging, online video gaming, Netflix, and iTunes; no online shopping; no file sharing; and no central backups of information. This unit begins by defining a network and addressing the benefits of networking, before covering how data is transmitted across networks using protocols.</p>	<p>Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems.</p> <p>Undertake creative projects that involve selecting, using, and combining multiple applications, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users.</p> <p>Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems.</p>	<p>Retrieval practice for spreadsheet terms.</p> <p>Final assessment to display all skills learnt in spreadsheet.</p> <p>Retrieval practice on hardware and protocols.</p> <p>Final assessment to assess networking knowledge.</p>

Trinity	<p>Programming essentials in Scratch: part I</p> <p>Can I turn an algorithm into code? This unit is the first programming unit of KS3. The aim of this unit and the following unit (Programming II) is to build learners' confidence and knowledge of the key programming constructs. Importantly, this unit does not assume any previous programming experience, but it does offer learners the opportunity to expand on their knowledge throughout the unit. The main programming concepts covered in this unit are sequencing, variables, selection, and count-controlled iteration.</p>	<p>Use a programming language, to solve a variety of computational problems.</p> <p>Understand simple Boolean logic and some of its uses in circuits and programming.</p>	<p>Ongoing programming tasks.</p> <p>Retrieval practice quiz on Scratch terms.</p> <p>End of Year exam on all content.</p>
	<p>Programming essentials in Scratch: part II</p> <p>Can I build further programming skills? This unit begins right where 'Programming I' left off. Learners will build on their understanding of the control structures' sequence, selection, and iteration (the big three), and develop their problem-solving skills. Learners will learn how to create their own subroutines, develop their understanding of decomposition, learn how to create and use lists, and build upon their problem-solving skills by working through a larger project at the end of the unit.</p>	<p>Use a programming language, to solve a variety of computational problems.</p> <p>Understand simple Boolean logic and some of its uses in circuits and programming.</p>	

Examples of Homework	Parental prompt sheet re. E-Safety Formatting spreadsheets by designing pixel art flags. Terminology lists for Computer Networking	
Key terminology	Algorithm, Command, Computer, Computer network, Condition, Conditional Formatting, Creative Commons, Cyberbullying, Data, Digital Footprint, Domain name, Information, Input, Internet, Internet of Things, Loop, Network, Output, Program, Router, Sandwich Technique, Selection, Server, Switch (network switch), URL (Uniform Resource Locator), Variable, WAP (Wireless Access Point), Web browser, Web page, Website, WiFi, WWW (World Wide Web),	
Super-curricular enrichment and scholarly extension	<ul style="list-style-type: none"> • Read: Computing Sharepoint Site (News Feed), MCI Resources • Watch: BBC Click, • Listen: BBC Sounds - Podcasts (Technology Section) • Visit: 3D Virtual Tour – The National Museum of Computing (tnmoc.org) 	
Useful websites	www.gcsepod.com KS3 Computer Science - BBC Bitesize Online dangers - Online safety - KS3 Computer Science Revision - BBC Bitesize	
Who can I contact?	Head of Department	Mark Jalowiecki - msj@forest.org.uk
	Teachers	Vinh Kieu - vk@forest.org.uk