



Curriculum Intent

Subject: **Computing**

Year: **7**

	What?	Why?	National Curriculum Links
Term 1-1	<p>Using Online Tools</p> <p>Pupils will be introduced to the school's computer systems and learn how to log on securely using their own credentials. They will be taught how to manage passwords safely and why secure authentication is essential in digital systems. Pupils will explore the concept of acceptable use and how rules help protect both users and systems. They will use a range of online communication tools, including Teams and email, to understand how to compose messages, identify recipients, and maintain a respectful tone. Pupils will also learn to recognise common online risks such as cyber bullying and inappropriate sharing, and how to respond to these safely. The unit culminates in creating a leaflet using desktop publishing software, reinforcing skills of layout, design, and digital literacy while promoting online safety.</p>	<p>This unit provides the foundation for all future Computing work by ensuring pupils can access and use digital tools effectively and responsibly. It develops communication and design skills which will support later projects in Creative iMedia, while reinforcing safe and respectful behaviour online, a theme that runs throughout KS3 and KS4. By working with publishing software, pupils also begin to develop transferable design skills that prepare them for more advanced media projects in Year 9. This builds directly on the online safety knowledge pupils gained in primary school, and prepares them for later units such as Back to the Future (history of computing) and Modelling Data (spreadsheets)</p>	<p>Understand how key developments in computer science have shaped the world; evaluate the impact of digital technology on wider society.</p>
Term 1-2	<p>Back to the Future (History of Computing)</p> <p>Pupils will study the development of computers from the earliest calculating devices to modern digital systems. They will learn how early machines such as the Colossus and ENIAC functioned, and how the invention of the transistor and microprocessor transformed computing. Pupils will be introduced to the concepts of Moore's Law and the exponential growth of computing power. They will also explore the development of networking and the internet, and how these innovations have influenced society, culture, and work. Pupils will consider the impact of computing on communication, globalisation, and everyday life, linking past technological changes to current trends.</p>	<p>Understanding the history of computing helps pupils appreciate how technological change shapes society and prepares them to evaluate future innovations critically. By linking computing developments to cultural and social change, pupils begin to understand ethical and societal impacts which they will revisit in Year 8 (<i>Ready Player One</i>) and Year 10 (<i>Ethics and Law</i>). This unit builds on the skills gained in <i>Using Online Tools</i> by contextualising how the systems pupils use today came to exist, and prepares them for technical content in <i>Networks</i> and <i>Data Representation</i>.</p>	<p>Understand how key developments in computer science have shaped the world; evaluate the impact of digital technology on wider society.</p>
Term 2-1	<p>Modelling Data (Spreadsheets)</p> <p>Pupils will learn to use spreadsheets to organise, analyse, and model data. They will explore how cells, rows, and columns are structured, and how formulas can be created to carry out calculations automatically. Pupils will apply functions such as SUM, AVERAGE, and IF to solve problems and will represent their findings visually using charts and graphs. They will also learn how to use spreadsheets to</p>	<p>This unit develops logical thinking and problem-solving skills that are transferable across the curriculum. Pupils will see how digital tools are used to support decision-making in real-world contexts. The skills gained here prepare pupils for future projects in iMedia where planning and modelling are essential, and link directly to the data representation concepts in Year 8. This unit builds on Back to the</p>	<p>Undertake creative projects that involve selecting, using, and combining software to analyse data and meet given goals.</p>



	<p>model real-world scenarios, such as budgeting or predicting outcomes, and how to test their models for accuracy.</p>	<p>Future by showing how computers are used practically in everyday tasks and prepares for the Networks unit, where data organisation and flow are key themes.</p>	
Term 2-2	<p>Networks</p> <p>Pupils will be introduced to the concept of computer networks, exploring the difference between LANs (Local Area Networks) and WANs (Wide Area Networks). They will study the hardware required to build a network, such as routers, switches, wireless access points, and network interface cards. Pupils will also examine how data is transmitted in packets, how the internet functions as a global network, and the role of DNS in translating website addresses. They will explore cloud services and consider the benefits and risks of online connectivity.</p>	<p>Networking knowledge helps pupils understand the invisible infrastructure that supports modern life, preparing them for deeper study at GCSE level. It builds on the historical understanding developed in Back to the Future, showing how innovations in networking transformed global communication, and it links forward to cyber security in Year 8. This unit also prepares pupils for Programming Fundamentals in Scratch, as they begin to think about how systems and devices exchange and process information.</p>	<p>Understand how instructions, data, and programs are transmitted between networked devices; understand key network components and the structure of the internet.</p>
Term 3-1	<p>Programming Fundamentals in Scratch 1</p> <p>Pupils will be introduced to the principles of programming using Scratch, a block-based visual programming environment. They will learn to design and implement simple algorithms to solve problems, using sequence to control the order of actions, selection to make decisions, and iteration to repeat processes. Pupils will also be introduced to variables to store and manipulate data within their programs. They will test their programs to identify and fix errors, learning the value of debugging as a problem-solving strategy.</p>	<p>Prerequisite for Y9 Python Programming lessons.</p> <p>This unit introduces pupils to computational thinking in a highly accessible way, building problem-solving, resilience, and logical reasoning skills. It builds on earlier digital literacy skills by encouraging pupils to take a more active role in creating with technology rather than just consuming it. It prepares pupils for <i>Programming Fundamentals in Scratch 2</i>, where they will extend their knowledge, and for Year 8 units <i>Introduction to Python Programming</i> and <i>Python PRIMM</i>, which introduce text-based coding.</p>	<p>Use logical reasoning to detect and correct errors in algorithms and programs; design and develop modular programs that use sequence, selection, and iteration.</p>
Term 3-2	<p>Programming II</p> <p>Programming II follows on from the foundations built in 'Programming I'. It is vital that learners complete 'Programming I' before beginning this unit.</p> <p>Pupils will extend their Scratch programming knowledge by exploring events, operators, and the use of multiple sprites to build more complex projects. They will learn how to design programs that respond to user input, combine different control structures, and work with both inputs and outputs. Pupils will also practise systematic debugging and testing to ensure their programs function as intended. This unit emphasises creativity, allowing pupils to design interactive projects such as games or animations.</p>	<p>This unit consolidates pupils' programming knowledge and encourages independence in designing and solving problems. It builds directly on <i>Programming Fundamentals in Scratch 1</i> and develops resilience and attention to detail through debugging. It prepares pupils for progression to <i>Introduction to Python Programming</i> in Year 8, ensuring that all pupils have a strong foundation in computational thinking before moving into text-based programming.</p>	