



What are the aims and intentions of this curriculum?

That children:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Term	Topic	Key Learning (Knowledge & Skills)	Key Vocabulary
Autumn 1	Networks and the internet (Computing systems)	<ul style="list-style-type: none">• Understand what a network is and how a school network might be organised.• Know that a server is central to a network and responds to requests made.• Know how the internet uses networks to share files.• Know that a router connects us to the internet• Know what a packet is and why it is important for website data transfer.• To understand the different components of a computer• To identify the purpose of a server• To learn what a network is and its purpose• To identify the key components within a network	device, file, internet, network, network map, network switch, router, server, submarine cables, the cloud, wifi, wireless access point



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Autumn 2	Scratch (Programming)	<ul style="list-style-type: none">• Know that Scratch is a programming language and some of its basic functions.• Understand how to use loops to improve programming.• Understand how decomposition is used in programming.• Understand that you can remix and adapt existing code.• To use decomposition to explore code behind an animation• To use repetition in programs• To use logical reasoning to explain how simple programs work• To form algorithms independently• To incorporate loops to make code more efficient• To use a more systematic approach to debugging code	animation, sprite, application, code, code block, debug, decompose, interface, loop, predict, program, review code, repetition code
Spring 1	Emailing (Computing systems)	<ul style="list-style-type: none">• Understand that email stands for 'electronic mail.'• Know that an attachment is an extra file added to an email• Understand that emails should contain appropriate and respectful content.• Know that cyberbullying is bullying using electronics such as a computer or phone.• To learn to log in and out of an email account• To write an email including a subject• To send an email with an attachment• To reply to an email• To identify useful terms and phrases for search engines	account, attachment, BCC, CC, computer, cyberbullying, domain, email, email account, emoji, information, log on/off, password, username, spam
Spring 2	Journey Inside a computer (Computing System)	<ul style="list-style-type: none">• know the roles that inputs and outputs play on computers.• know what some of the different components inside a computer are e.g. CPU, RAM, hard drive, and how they work together.• know what a tablet is and how it is different from a laptop/desktop	algorithm, computer, computer program, CPU, Data, desktop, GPU, Hard Disk Drive, Instructions, QR Code, RAM, ROM, Tablet,



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		<p>computer.</p> <ul style="list-style-type: none"> • Understand what the different components of a computer do and how they work together. • Draw comparisons across different types of computers. • Use decomposition to explain the parts of a laptop computer. • Explain the purpose of an algorithm 	Trackpad
Continuous	Online Safety	<ul style="list-style-type: none"> • Know the difference between fact, opinion and belief • Know how to deal with upsetting online content • Know we should try to avoid sharing very personal information with people we do not know • Know how to protect our personal information • Identify who personal information should not be shared with • Identify that not all information on the internet is factual • Recognise when an email might be fake and what to do about it • Identify ways to treat others respectfully • Recognise when digital behaviour is unkind 	fact, opinion, belief, Internet, search engine, accuracy, reliability, privacy settings, block and report, social media, age restrictions
Summer 1	Video trailers (Creating Media)	<ul style="list-style-type: none"> • Know that different types of camera shots can make my photos or videos look more effective. • Know that different types of camera shots can make my photos or videos look more effective. • Understand that I can add transitions and text to my video. • Use software to edit and enhance their video adding music, sounds and text on screen with transitions. • Take photographs and recording video to tell a story. • Use logical thinking to explore more complex software; predicting, testing and explaining what it does. 	application, desktop, digital device, edit, filming, graphics, import, key events, laptop, plan, recording, sound effects, time code
Summer 2	<u>Comparison card databases (Data Handling)</u>	<ul style="list-style-type: none"> • Know that a database is a collection of data stored in a logical, structured and orderly manner. 	categorise, data, database, fields, filter, graphs and



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		<ul style="list-style-type: none">• Know that computer databases can be useful for sorting and filtering data.• Know that different visual representations of data can be made on a computer.• To understand the vocabulary associated with databases: field, record and data• To compare digital and paper databases• To sort and filter databases to retrieve information• To create and interpret charts and graphs to understand data	charts, information, record, sort, spreadsheet
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