



Computing at Longparish C.E. Primary School

**Progression of skills
and
National Curriculum coverage**

National Curriculum Guidance:

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

	Year 1/2	Year 3/4	Year 5/6
Curriculum Objectives	<p>Pupils should be taught to:</p> <p>understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</p> <p>create and debug simple programs</p> <p>use logical reasoning to predict the behaviour of simple programs</p> <p>use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>recognise common uses of information technology beyond school</p> <p>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies</p>	<p>Pupils should be taught:</p> <p>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>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</p> <p>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>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</p>	

		use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	
Vocabulary	Algorithms, decomposition, sequences, repetition	Algorithms, decomposition, sequences, repetition, selection	Algorithms, decomposition, sequences, repetition, selection, variables
Digital Literacy Online Safety	<ul style="list-style-type: none"> • Use technology safely and respectfully • Keep personal information private <p>Children begin to consider their activity on the internet and learn about ways to keep themselves safe and why it is important to do so.</p>	<ul style="list-style-type: none"> • Use technology safely and respectfully • Identify a range of ways to report concerns about content • Recognise acceptable/unacceptable behavior <p>They also compare appropriate and inappropriate activity on the internet and decide what to do next. Children become more aware of their digital footprint by reflecting on their experience on the internet. They are able to understand more about age-appropriate websites.</p>	<ul style="list-style-type: none"> • Use technology safely and responsibly • Recognise acceptable/unacceptable behavior • Is discerning in evaluating digital content <p>Children are also introduced to the concept of plagiarism and citation. Children are encouraged to identify online risks and share their knowledge of the risks and consequences for people online. They begin to think more critically about what they see online and look at the concept of fake news and false photographs.</p>
Computer Science Shaping the online world	<ul style="list-style-type: none"> • Understand what algorithms are • to create and debug simple programs • Understand that programs execute by following precise and unambiguous instructions • Use logical reasoning to predict the behaviour of simple programs <p>Children begin to understand their influence on technology by developing their programming skills to determine output. They begin to</p>	<ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals • Use sequence and repetition in programs • Work with various forms of input • Control or simulates physical systems • Use logical reasoning to detect and correct errors in programs • Understand how computer networks can provide multiple services, such as the World Wide Web 	<ul style="list-style-type: none"> • Solve problems by decomposing them into smaller parts • Use selection in programs • Work with variables • Use logical reasoning to explain how some simple algorithms work • Use logical reasoning to detect and correct errors in algorithms • Understand computer networks, including the internet • Appreciate how search results are ranked

	<p>understand that an algorithm is a series of steps for solving problems and a code is a series of steps that machines can execute. They begin to explore debugging, predicting when codes may not work and changing them.</p>	<p>Children build on their programming skills by solving problems and programming commands to achieve a specific outcome. They begin to write programs, explain algorithms and identify errors in their work.</p>	<p>Children build on their programming skills by using new systems. They continue to break down problems and create algorithms to solve them. They are able to explain the outcome of an algorithm with confidence and accuracy.</p>
<p>Digital Literacy</p> <p>Communicating in the Digital World</p>	<ul style="list-style-type: none"> Recognise common uses of information technology beyond school <p>Children begin to make links to how they use technology outside of the classroom. They begin to think about the benefits of using technology in their lives, making links to learning about online safety.</p>	<ul style="list-style-type: none"> Understand the opportunities computer networks offer for communication <p>Children refer to online safety rules when discussing technology in their lives. They become more confident in using email for communication, including attaching and saving files from emails.</p>	<ul style="list-style-type: none"> Understand the opportunities computer networks offer for collaboration be discerning in evaluating digital content <p>They become more confident in understanding the reliability of information online.</p>
<p>Information Technology</p> <p>Exploring the Digital World</p>	<ul style="list-style-type: none"> Use technology purposefully to create digital content Use technology purposefully to store digital content Use technology purposefully to retrieve digital content Use technology purposefully to organise digital content Use technology purposefully to manipulate digital content <p>Children begin to understand the particular purposes technology can be used for and that by adding text and images you can communicate with technology. Children develop their skills in typing, selecting tools and</p>	<ul style="list-style-type: none"> Use search technologies effectively Use and select a variety of software to accomplish given goals Collect information Design and create content Present information Select, use and combine internet services Analyse and evaluate information Collect and present data <p>They are able to navigate between websites and use safe search terms on trusted search engines.</p>	<ul style="list-style-type: none"> Combine a variety of software to accomplish given goals Select, use and combines software on a range of digital devices Analyse and evaluate data Design and create systems <p>Children can use safe search terms on trusted search engines, and evaluate websites based on layout and information</p> <p>Data Handling in UKS2 focuses on selecting the correct method to display data and using software such as google sheets. Children also learn how to</p>

	<p>organising information.</p> <p>Children begin to develop their creativity using technology through recording sound. Children will also begin to develop their editing skills and control of the tools.</p>	<p>Children begin to explore expressing information in tables, sorting and organising information for others to be able to understand.</p> <p>Children develop their skills of formatting using keyboard commands, organising their work to demonstrate effect. In LKS2, they will have the opportunity to express themselves more. Children should continue to demonstrate control when operating tools as in KS1.</p> <p>Children develop their editing skills further by cropping, organising and arranging film clips. They are able to share work and offer feedback and ideas for improvement with animation and film, giving their opinion on which software to use.</p>	<p>check the accuracy of data and compare data for a specific purpose.</p> <p>Children begin to look at new software and develop their editing skills further. They become more confident in inserting links, images and formatting text to create effect.</p> <p>Children begin to look more into multimedia broadcasting, learning new skills. They become more confident in post-production with editing, trimming and refining their work based on plans they have made.</p>