



Consideration, Care and Courtesy
St Edmund's Catholic Primary School

Computing Curriculum Document

Aims	<p>The national curriculum for computing aims to ensure that all pupils:</p> <ul style="list-style-type: none"> • can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation • can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems • can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems • are responsible, competent, confident and creative users of information and communication technology 		
	Digital Literacy	Information Technology	Computer Science
Year 1	<ul style="list-style-type: none"> • Recognise common uses of information technology beyond school. • Understand the rules and responsibilities outlined by the school's acceptable use policy and begin to understand where to go for help when they have concerns. • Develop an understanding of how to keep their personal information private and understand they need to use technology safely and respectfully. 	<ul style="list-style-type: none"> • Use technology with support, to create, store and retrieve digital content such as text and images. • Use a simple search to find information or files. • Develop understanding of how simulations work through exploring simple examples. 	<ul style="list-style-type: none"> • Understand what algorithms are and develop strategies to help find bugs in them. • Make very simple programs.

<p>Year 2</p>	<ul style="list-style-type: none"> • Know their responsibilities from their school’s acceptable use policy and how to report any concerns they have. • Recognise situations using technology and the internet involving content and contact that are not safe and know where to go for help. • Begin to develop an understanding of the importance of computers and the internet to communicate. • Develop their knowledge of the technology used in everyday life in a range of situations and be able to discuss their ideas. 	<ul style="list-style-type: none"> • Use technology with purpose to create, store, organise, retrieve and manipulate digital content. • Learn to make a range of simple digital assets such as presentations, movies, audio files and graphs. • Navigate the web and carry out simple searches using suitable search engines and begin to understand that not everything on the internet is true. • Use simple simulations and understand how they work. 	<ul style="list-style-type: none"> • Use algorithms and know that they can be implemented as programs on devices. • Know what debugging is and find errors in their programs. • Understand that programs execute by following a precise set of instructions. • Create simple programs and further develop their strategies and logical thinking to find bugs and predict outcomes in their algorithms and programs.
<p>Year 3</p>	<ul style="list-style-type: none"> • Use technology safely and respectfully and have an understanding of how to keep information secure. • Realise the importance of reporting any concerns they have using the internet and other communication technologies, and know some ways in which they can do it. • Develop an understanding of what is acceptable and unacceptable online behaviour. • Realise that not all information on the internet is trustworthy and there is a need to verify its reliability. 	<ul style="list-style-type: none"> • Use a variety of software and devices to create digital assets such as programs, graphs and multimedia content for a defined purpose. • Develop their search strategies further by refining their use of keywords and starting to use appropriate key phrases and questions. • Use more complex simulations and understand the effects of changing variables. 	<ul style="list-style-type: none"> • Plan and write algorithms and programs using sequence and repetition and further develop their computational thinking strategies to solve problems and errors in their algorithms and programs. • Have knowledge and experience of using a range of different inputs and outputs. • Describe some of components of a computer network and some of the ways in which computer networks can be used.
<p>Year 4</p>	<ul style="list-style-type: none"> • Use technology respectfully, responsibly and safely, knowing how to keep their information and passwords secure. • Know different ways of reporting concerns about content and contact involving the internet and other communication technologies. 	<ul style="list-style-type: none"> • Use and combine a variety of software and devices with increasing independence, to create a range of digital assets such as programs, databases, systems and multimedia content. • Understand how Boolean operators can change searches and select appropriate information for their tasks. 	<ul style="list-style-type: none"> • Design and write more complex algorithms and programs using sequence, repetition and selection. • Further develop their computational thinking to help debug their programs and design and solve problems and tasks. • Have a simple understanding of how search engines work.

	<ul style="list-style-type: none"> • Have a greater understanding of what is acceptable and unacceptable online behaviour. • Start to develop strategies to verify the reliability and accuracy of information on the internet and develop an awareness of copyright. 	<ul style="list-style-type: none"> • Use models and simulations to produce graphs and explore patterns and relationships. 	<ul style="list-style-type: none"> • Develop their understanding of inputs and outputs further, demonstrating how they can use programs to control external devices such as sensors, motors and robots. • Understand the difference between the internet and World Wide Web.
Year 5	<ul style="list-style-type: none"> • Use technology respectfully, responsibly and safely, knowing how to keep their information and passwords secure. • Know different ways of reporting concerns about content and contact involving the internet and other communication technologies. • Have a greater understanding of what is acceptable and unacceptable online behaviour. • Start to develop strategies to verify the reliability and accuracy of information on the internet and develop an awareness of copyright. 	<ul style="list-style-type: none"> • Use and combine a variety of software and devices with increasing independence, to create a range of digital assets such as programs, databases, systems and multimedia content. • Understand how Boolean operators can change searches and select appropriate information for their tasks. • Use models and simulations to produce graphs and explore patterns and relationships. 	<ul style="list-style-type: none"> • Design and write more complex algorithms and programs using sequence, repetition and selection. • Further develop their computational thinking to help debug their programs and design and solve problems and tasks. • Have a simple understanding of how search engines work. • Develop their understanding of inputs and outputs further, demonstrating how they can use programs to control external devices such as sensors, motors and robots. • Understand the difference between the internet and World Wide Web.
Year 6	<ul style="list-style-type: none"> • Be competent users of technology using it safely, respectfully and responsibly and know about digital footprints and 'strong' passwords. • Demonstrate that they can identify the risks involved with content and contact and they know a wide range of ways of reporting any concerns they have. • Understand what acceptable and unacceptable online behaviour is. • Use strategies to verify and evaluate the reliability and accuracy of information on the internet and understand what copyright and plagiarism is and how it relates to their work. 	<ul style="list-style-type: none"> • Independently select, use and combine a wide range of software on a variety of devices. • Design and create a range of digital assets such as programs, systems and multimedia content for a defined purpose and audience. • Use advanced searches including the use of operators. • Create spreadsheet models to investigate real life problems, using their knowledge to make predictions. 	<ul style="list-style-type: none"> • Know how search engines work and what 'ranking' is when related to search engines. • Design and create more complex programs using sequence, repetition, selection and variables appropriately. • Develop their computational thinking can demonstrate that they can decompose and evaluate their tasks and correct errors in their algorithms and programs. • Be confident in their knowledge of inputs and outputs and plan and write programs to solve tasks to control external devices such as sensors and motors.

			<ul style="list-style-type: none">• Know how different computer networks work, including the roles of the components and the opportunities and benefits that they offer for communication and collaboration.• Understand the difference between the internet and internet services.
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