



St. John Fisher Catholic Primary School

Growing through God, we learn, laugh and love.



WHOLE SCHOOL COMPUTING CURRICULUM OVERVIEW

Key Stage 1	Key Stage 2
<p>Pupils should be taught to: 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 to: 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. 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> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>

Key Stage 1		Lower Key Stage 2		Upper Key Stage 2	
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Literacy					
<p>Explain how other people's identity online can be different to their identity in real life</p> <p>Give examples of issues online that might make me feel sad, worried, uncomfortable or frightened and give examples of how I might get help</p> <p>Recognise that information about me can stay online for a long time and could be copied</p> <p>Describe what information should not be put online without asking a trusted adult first</p> <p>Explain rules to keep us safe when we are using technology both in and beyond the home and give examples</p>	<p>Recognise that there may be people online who could make me feel sad, embarrassed or upset</p> <p>Explain why it is important to be considerate and kind to people online in ways that do not upset others</p> <p>Use the internet to communicate with people you don't know well and give examples of how you might use technology</p> <p>Give examples of bullying behaviour, how it could look online and how it can make someone feel</p> <p>Talk about how someone can/would get help about being bullied online or offline</p>	<p>Describe ways people who have similar likes and interests can get together online</p> <p>Describe how to search for information within a wide group of technologies (e.g. social media, image sites, video sites)</p> <p>Explain what autocomplete is and how to choose the best suggestion</p> <p>Explain how the internet can be used to sell and buy things</p> <p>Use search engines effectively and narrow search results down</p> <p>Explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true</p>	<p>Explain how my online identity can be different to the identity presented in real life and describe the right decisions about how to interact with others and how others perceive us</p> <p>Explain why you need to think carefully about how content you post might affect others, their feelings and how it may affect how others feel about them (their reputation)</p> <p>Recognise the need to be careful before sharing anything online and only with people you can trust</p> <p>Explain what bullying is and describe how people may bully others</p> <p>Describe rules about how to behave online and how to follow them</p>	<p>Describe some simple ways that help build a positive online reputation</p> <p>Evaluate digital content and explain how to make choices from search results</p> <p>Explain how search engines work and how results are selected and ranked</p> <p>Demonstrate strategies to enable you to analyse and evaluate the validity of 'facts'</p> <p>Describe ways technology can affect health and know strategies, tips or advice to promote healthy living</p> <p>Explain the importance of self-regulating the use of technology and demonstrate the strategies to do this</p>	<p>Explain how identity online can be copied, modified or altered</p> <p>Demonstrate responsible choices about my online identity, depending on context</p> <p>Describe ways in which media can shape ideas about gender and identify messages about gender roles and make judgments based on them</p> <p>Describe issues online that might make me or others feel sad, worried, uncomfortable or frightened.</p> <p>Make positive contributions and be part of online communities and describe how to collaborate with others positively</p>

<p>Recognise examples of information that is personal to me and what information not to put online</p> <p>Describe why other people's work belongs to them and recognise that content on the internet may belong to other people</p> <p>Explain why work created using technology belongs to you</p>	<p>Use simple keywords in a search engine to find things out</p> <p>Navigate a simple web page to get to information needed (e.g. home, forward, back buttons; links, tabs and sections)</p> <p>Describe and demonstrate how to get help from a trusted adult if I find content that makes me feel sad, uncomfortable, worried or frightened</p> <p>Explain how devices can connect to the internet and list some of those devices</p>	<p>Analyse information and have ways to check its credibility</p> <p>Be skeptical of things I find online such as fauxtography</p> <p>Explain why copying someone else's work from the internet without permission can cause problems</p>	<p>Use search engines effectively and narrow search results down</p> <p>Understand the different types of social media platforms and how they are used for communication</p> <p>Describe ways technology can affect health</p> <p>Explain the importance of self-regulating the use of technology</p> <p>Understand and give reasons why strong passwords are important and describe simple strategies for creating and keeping passwords private</p> <p>When searching on the internet for content to use, explain why you need to consider who owns it and whether you have the right to reuse it</p>	<p>Describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose</p> <p>Understand that there are many positives and negatives to using social media</p> <p>Assess and justify when it is acceptable to use the work of others and give examples of content that is permitted to be reused</p> <p>Demonstrate the use of search tools to find and access online content which can be reused by others</p> <p>Demonstrate how to make references to and acknowledge sources that have been used from the internet</p>	<p>Explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming)</p> <p>Describe how to get help for someone that is being bullied online and assess when to do or say something or tell someone</p> <p>Identify a range of ways to report concerns about online bullying both in school and at home</p> <p>Understand the difference between online mis-information (inaccurate information distributed by accident) and dis-information (inaccurate information deliberately distributed and intended to mislead)</p> <p>Explain why information that is on a large number of sites may still be inaccurate or untrue,</p>
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Key Stage 1		Lower Key Stage 2		Upper Key Stage 2	
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science					
<p>Create simple programs</p> <p>Design and create programs for others to play</p> <p>Describe uses of technology beyond school</p> <p>Predict the outcomes of a program</p>	<p>Create simple programs</p> <p>Debug an error in a simple algorithm</p> <p>Understand that instructions in an algorithm need to be precise and unambiguous</p> <p>Use logical reasoning to predict the behaviour of simple programs</p> <p>Use simple repeats in programs</p> <p>Use basic selections in programs and explain using the language if ... then</p> <p>Understand basic programming techniques</p> <p>Identify, name and explain the functions of the main components of a computer</p>	<p>Identify the uses of technology beyond school and discuss reasons why they are helpful (e.g. robots and simulations)</p> <p>Understand how a computer stores data</p> <p>Understand the main hardware components of a computer system</p> <p>Understand various forms of input/output</p> <p>Understand how the internet works, including how it is structured and that data travels along</p>	<p>Design and create a prototype game and make improvements following feedback</p> <p>Review a game and make improvements by debugging</p> <p>Create a program using a range of events/inputs to control what happens</p> <p>Work with various forms of input/output</p> <p>Write programs that accomplish specific goals</p> <p>Use selection in algorithms and programs, i.e. if... then...</p> <p>Use logical reasoning to write simple algorithms explaining the sequence commands should run in</p> <p>Solve problems by decomposing into smaller parts</p>	<p>Work independently to design and program a game for a specific audience</p> <p>Program a game which tells a story over more than one level</p> <p>Experiment with different codes to test each element of a game until a desired outcome is reached</p> <p>Make predictions on what will happen in a program when inputs are changed</p> <p>Test, debug and improve programs</p> <p>Describe the impact of technology on society</p> <p>Understand about e-commerce - what it is and its impact</p> <p>Investigate the services offered by the internet</p>	<p>Write programs that accomplish specific goals</p> <p>Use selections and procedures in programs to draw shapes, patterns and pictures</p> <p>Create programs including repeat commands</p> <p>Create simple variables and understand their role in a program</p> <p>Use logical reasoning to detect and correct errors in algorithms</p> <p>Work independently on a topic to build and create a website with pages, titles, images, videos and text</p> <p>Recognise the audience when designing and creating an app/website</p>

	<p>Investigate how computers have changed over the years</p> <p>Name and compare common input and output devices of computer systems</p> <p>Identify and describe uses of technology beyond school</p> <p>Explain how robots can be controlled</p>		<p>Debug programs so they run correctly</p> <p>Create programs including repeat commands</p> <p>Create different graphs and tables and interpret them</p> <p>Embed an interactive quiz into a website</p> <p>Create an interactive quiz and program right and wrong answers</p>	<p>Understand about different types of robotics and how they can impact our lives</p> <p>Understand about the advancements in technology and the impact this has had on society</p> <p>Work independently on a topic to build and create a website with pages, titles, images, videos and text</p> <p>Use wire-frames to plan the build for an app</p> <p>Work collaboratively, using various tools independently for use in an app design</p> <p>Recognise my audience when designing and creating a website</p>	<p>Create variables in spreadsheets and understand their role in a program</p>
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Key Stage 1		Lower Key Stage 2		Upper Key Stage 2	
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information Technology					
<p>Create posters by adding images to frames, editing text by changing font style, colour and size</p> <p>Create images with different layers by placing one image on top of another</p> <p>Combine words and images to create word art</p> <p>Create a visual plan using images and text to tell a story</p> <p>Create a simple presentation using slides</p> <p>Combine images, text and voice recordings to retell a story</p> <p>Combine images and edit text to create front covers, posters and invitations</p>	<p>Create digital books combining text, images, and sounds</p> <p>Type words in a speech bubble using a keyboard</p> <p>Combine text and images to create a video presentation</p> <p>Type words correctly using a keyboard</p> <p>Edit video content to improve it</p> <p>Collect images by capturing screenshots and editing them</p> <p>Combine images to create digital galleries</p> <p>Present information on a topic using images, text boxes and voice recordings</p> <p>Create an animation with moving characters and voice recordings</p>	<p>Combine text (fonts, colours, backgrounds, speech bubbles), images, voice recordings and videos to create a digital book</p> <p>Edit digital content to improve it according to feedback</p> <p>Create and edit a video/animation combining text, images and music</p> <p>Combine words and images to create word art</p> <p>Design and create digital logos and graphics, combining fonts and texts</p> <p>Create a contents page, a blurb and add page numbers</p> <p>Create a presentation with slides that include animations and transition effects</p>	<p>Understand why it's important to know your audience when designing games</p> <p>Remove the background from images</p> <p>Using photo editing tools to improve the quality of images</p> <p>Create digital books/posters by combining text, images, voice recordings and videos</p> <p>Create and edit a video by combining text, images and music</p> <p>Use a keyboard accurately with two hands to type and format documents</p> <p>Use a digital drawing tool to create prototype designs</p> <p>Combine text (fonts, colours, backgrounds),</p>	<p>Identify the pros and cons of different games</p> <p>Organise digital content by combining text boxes and images</p> <p>Make changes to digital content to animate characters in the game</p> <p>Use creative tools to create a marketing campaign for a game</p> <p>Design and create a series of 8 bit characters</p> <p>Combine text and images to create digital posters</p> <p>Plan and create a video by combining images, text, music and different layouts</p> <p>Use word processing tools to format a document</p>	<p>Present understanding of new programming concepts with digital tools</p> <p>Plan a digital resource to teach a specific audience something new</p> <p>Make choices on the best digital software available to present my ideas</p> <p>Edit videos, graphics and documents independently to create a digital book or an app/website</p> <p>Work independently to combine a range of tools (text, video, graphics, images) to present ideas clearly for an audience to follow</p> <p>Use editing tools to label digital images</p> <p>Evaluate my own content against a</p>

<p>Explore augmented reality and capture images</p> <p>Use digital drawing tools to draw characters from a story or for a game</p> <p>Type words correctly using a keyboard</p> <p>Create a simple animation with moving characters and voice recordings</p> <p>Use a camera to capture images which are in focus</p> <p>Select options to change the appearance of digital content</p> <p>Apply edits to digital content to achieve a particular effect</p> <p>Create digital galleries using images and text</p> <p>Use photo editing tools to crop images</p> <p>Create digital books combining text, images, and sounds</p>		<p>Combine images and text for different effects</p> <p>Use a camera accurately to capture interesting perspectives</p> <p>Apply edits to digital content to achieve a particular effect and save them as both images and videos</p> <p>Create galleries that include images, videos and effects</p> <p>Plan a movie with a script that has a beginning, middle and end and combines text, music and images</p> <p>Select options to change the appearance of digital content and explore tools to edit it</p> <p>Plan a simple animation using a storyboard</p> <p>Take a series of pictures and combine</p>	<p>images, voice recordings and videos to create a digital book</p> <p>Create a presentation with slides with animations and transition effects</p> <p>Create graphics with texts and images</p> <p>Use the camera accurately to create a short clip for editing</p> <p>Organise a movie, adding titles, images and effects</p> <p>Build a website, web app or webpage that includes pages, text, images and videos in a clear and organised way</p> <p>Edit digital content to improve it according to feedback</p> <p>Create an app/website with menus for ease of navigation</p>	<p>Work independently to create a presentation that includes graphics, images and movies</p> <p>Make a presentation to an audience using digital tools</p> <p>Design and build a web page and share it online</p> <p>Plan a multi-scene animation including characters, scenes, camera angles and effects</p> <p>Edit a stop-go animation to improve the quality of the animation using 'onion skinning' features</p> <p>Create title and credits screens by combining colours and text</p> <p>Edit/refine a movie to add special effects, text, sound effects, graphics and backing track</p> <p>Evaluate my own content against success criteria and</p>	<p>success criteria and make improvements accordingly</p> <p>Format a digital document to present ideas</p> <p>Design a suitable brand for a business and promote it</p> <p>Create a spreadsheet with formulas for profit and loss of a business</p> <p>Work independently to create a presentation that includes graphics, images and movies</p> <p>Design and build a web page and share it online</p> <p>Combine text and images to create eye-catching social media adverts</p> <p>Make a presentation to an audience using digital tools</p> <p>Create a video for a marketing campaign and make</p>
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<p>Collect images by capturing screenshots and editing them</p> <p>Make improvements to digital content following feedback</p>		<p>them to form an animation</p> <p>Add text, graphics and sound effects to improve an animation using editing tools</p> <p>Create an animation with moving characters/objects, keeping the camera steady, using 'onion skinning'</p> <p>Combine animated characters and voice recordings for particular effects</p> <p>Explore augmented reality and capture images and videos</p> <p>Explore green screen technology and capture and edit videos</p>		<p>make improvements accordingly</p>	<p>improvements following feedback</p>
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