Computing Curriculum Overview

Intent:

At **St Francis CE Primary School**, our Computing curriculum is rooted in our Christian vision that **"Every person matters, every person helps, every person succeeds,"** enabling all children to **live life in all its fullness**.
The computing curriculum at St Francis aims to provide children with the skills, knowledge, and confidence to use technologies safely, responsibly, and creatively. Over time, children become increasingly independent in using technologies, collaborate effectively to solve complex problems, and use computing as a powerful tool for learning and communication.
Through engaging and purposeful experiences, children are encouraged to **embrace and enjoy technology**, understand its role in everyday life, and recognise exciting opportunities for future careers in computing. The curriculum is designed to develop every child's computing skills using a broad range of **platforms, applications, software, and hardware**, ensuring that they leave primary school confident and capable in using IT across education, home, and beyond.
Our Computing curriculum also actively promotes our Christian values:

- **Courage** – experimenting with new technologies and taking risks in problem-solving
- **Peace** – using technology safely and responsibly
- **Thankfulness** – valuing the opportunities that technology provides for learning and creativity
- **Trust** – collaborating effectively and respecting others' work and ideas
- **Friendship** – working together on projects and supporting peers
- **Hope** – inspiring aspiration and curiosity in the world of technology

Through computing, children develop essential skills for the digital age while fostering resilience, collaboration, and creativity, preparing them to thrive academically, socially, and personally, and to truly **live life in all its fullness**.

Implementation: Early Years

In the Early Years at **St Francis CE Primary School**, the impact of our Computing curriculum is seen in curious, confident, and engaged children who explore and enjoy technology safely and creatively. Computing is taught in ways that **support the EYFS framework** and align with **Development Matters**, particularly in the areas of **Understanding the World – Technology** and **Expressive Arts and Design – Creating with Media and Materials**.Children are encouraged to **problem-solve, experiment, and collaborate**, reflecting our values of **courage**, **trust**, and **friendship**. Technology is used to enhance learning across all areas, including accessing stories, songs, and creative resources, fostering **thankfulness** for opportunities to learn and a sense of **hope** as they achieve and explore new skills.Children also develop an understanding of **online safety**, learning to follow rules, use devices responsibly, and recognise acceptable behaviour, in line with early computing expectations in Development Matters. By the end of the Early Years, children have:

- Developed confidence and curiosity in using digital tools.

- Applied technology to support their learning across the curriculum.
- Begun to understand how to keep themselves safe online.
- Built the foundations for independent, creative, and purposeful use of technology in Key Stage 1 and beyond.

Through this approach, children are equipped with the skills, attitudes, and understanding to **live life in all its fullness**, embracing technology as a positive and empowering part of their learning journey.

Implementation:

Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	**Computing Systems and Networks** Draw a digital self-portrait and type a sentence about where you live	**Programming A** Make an algorithm for a toy robot	**Creating Media** Create a digital painting of a cold place	**Programming B** Create a race story using Scratch just like Captain Scott	**Data and Information** Group data focused on the weather in Falmouth	**Creating Media** Digitally describe Pendennis Castle
Year 2	**Programming** Create a program about the seasons	**Computing Systems and Networks** Understand the importance of IT for researching the past	**Creating Media** Create a piece of music inspired by the ocean or an ocean animal	**Programming** Create a Fire of London floor mat	**Data and Information** Make a presentation about animals around the world	**Creating Media** Take and later a photograph of a Cornish tin mine
Year 3	**Computing Systems and Networks** Research the Stone Age and Iron Age	**Creating Media** Create a Stop – frame animation of a person from an Ancient Civilisation	**Data and Information** Compare places using data	**Creating Media** Write a report on the impact of an earthquake or volcano	**Programming** Create a game based on Roman life	**Programming** Write and perform a rap about what makes Falmouth unique
Year 4	**Computing Systems and Networks** Decide which information can be trusted while researching	**Creating Media** Create a Day in the Life podcast of a Viking raider	**Programming** Create digital artwork inspired by Greece	**Programming** Create a game inspired by Ancient Greek times	**Creating Media** Take, edit and alter a photograph of the Falmouth coastline	**Data and Information** Record and present data about our local area
Year 5	**Creating Media** Create a digital map	**Computing Systems and Networks** Research Ancient Greece using a search engine	**Programming** Create a road safety tool for use by children at night	**Programming** Create a quiz about Tudor life	**Data and Information** Plan a holiday and compare flights around the world that fly from London	**Creating Media** Make a presentation about the Victorian period

Year 6	**Creating Media** Create a digital 3D building inspired by the pyramids	**Programming** Use a micro:bit to test for an earthquake and create a smart, sustainable home	**Creating Media** Create a web page to inform an audience about WW2	**Programming** Create a digital game to support knowledge of core subjects	**Computing Systems and Networks** Research and present about the Titanic	**Data and Information** Plan for and understand the cost of your End of year Prom

Progression Map

Computing Progression Components Map

Computer Science (CS)							
	EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Algorithms and programming.	Recognise that a range of technology is used in places such as homes and schools. Select and use technology for a particular purpose. Follow simple oral algorithms. Recognise patterns. Input a simple sequence of commands to control a digital device with support (Bee Bot). Use a mouse, touch screen or appropriate device to target and select options on screen.	Understand algorithms as sequences of instructions and create a simple algorithm using everyday language or symbols (e.g. instructions for a Lego model). Understand that programs work by following algorithms and create a simple program using algorithms on a digital device (e.g. plan steps to control a Bee Bot).	Understand algorithms as sequences of instructions or sets of rules and create a simple algorithm using everyday language or symbols (e.g. how to share sweets). Create an on-screen program using algorithms (e.g. Scratch). Debug simple errors in own code.	Create a simple program using a block language, without user interaction (e.g. create a simple animation in Scratch with a sprite, dialogue and background) Use sequences of commands or blocks in on-screen programming, producing an output on the screen (e.g. a simple animation in Scratch).	Create a program using a block language, with simple user interaction (e.g. create a simple game involving use of backgrounds, props, sprites, costumes, sound). Use sequences & repetition [e.g. repeat… until…] of commands or blocks in on-screen programming, inc keyboard inputs & on-screen outputs (e.g. write a game using Scratch with repeated commands)	Independently create, test & debug complex programs using a block language (e.g. create, test & debug a Scratch animation with multiple scenes, background, sprites, dialogue, music & costume). Use sequences, selection [e.g. if…then…] and repetition [e.g. repeat… until…] of commands or blocks in on-screen programming, including both keyboard/mouse inputs, and onscreen outputs.	Independently create, test and debug a program using a second programming language (e.g. create, test and debug a Smartphone app) Use sequences, selection [e.g. if…then…], variables & repetition [e.g. repeat… until…] of commands/blocks in on-screen programming, including other types of input/output (e.g. create a Smartphone app). Develop, create & debug computer control applications (e.g. develop use of Lego WeDo)
Logical Reasoning		Explain what they think a simple program will do.	Give a logical explanation for predicting the behaviour of programs.	Explain a sequence algorithm in own words. This could be graphical (e.g. explain the reasoning for a Scratch animation). Use logical reasoning to begin to detect errors in their own or others' programs, giving reasons.	Explain an algorithm using sequence and repetition, in their own words (e.g. explain the algorithm for their Scratch game). Use logical reasoning to detect and fix errors in their own or others' programs, giving reasons. Test the program to ensure they are fixed.	Explain a rule-based algorithm game in their own words (e.g. explain the rules for Scratch animation). Use logical reasoning to detect and fix errors in rules-based or sequenced algorithms, giving reasons (e.g. spot and correct errors in the rules of their game).	Give clear & precise logical explanations of algorithms (e.g. explain event-driven algorithms in app). Use logical reasoning to detect and fix errors in rules-based or sequenced algorithms, giving reasons (e.g. spot and correct errors in the rules of their game)
Networks				Understand the basic concept of a network. Understand more about the world wide web, including URLs. Understand that email (using servers) is made possible through the internet.		Understand and explain how data packets are routed on the internet. Understand the basics of a Local Area Network (LAN) and a Wider Area Network (WAN), and that information is sent via the internet using data packets	

Information Technology (IT)							
	EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Using and Creating	Recognise that a range of technology is used in places such as homes and schools. Select and use technology for a particular purpose. Use computers, keyboards and mouse in role play. Type letters with increasing confidence using a keyboard. Input sound into a digital device (iPad, Talking Tins).	Use digital technology to store and retrieve content (e.g. store and access saved work on laptops and tablets) Create original content using digital technology (e.g. filming digital video, creating a greetings cards).	Store, organise and retrieve content on digital devices for a given purpose, naming my files meaningfully. Create and edit original content thinking about the audience, using digital technology (e.g. take and edit a digital photo/video, create and edit a presentation, create and edit a word document).	Use a range of computer software (e.g. video editing, presentation, spreadsheets). Design and create content on a computer (e.g. take photos and use in a Comic Strip). Collect and present information (e.g. Create an online poll at present the information in Powerpoint.)	Use and combine a variety of software on a computer (e.g. analyse data in a spreadsheet and present using presentation software). Design and create content on a computer (e.g. plan, shoot and edit a video, plan and create a presentation) Collect and present data, including numerical data (e.g. collect weather data and create charts in Excel).	Use and combine a variety of software on multiple devices. Design and create programs on a computer in response to a given goal (e.g. design and write a simple computer program in a block-based language such as Scratch). Analyse and evaluate information from text, audio, images or video, including analysing the quality of information (e.g. evidence of bias or assumptions).	Use and combine a variety of software on multiple devices. Design and create systems in response to a given goal, with multiple, interrelated components (e.g. develop an App, considering input, output and connectivity, the operating system, algorithms, code and user interface. Use spreadsheet formulae to calculate and present numerical data (e.g. design a maths quiz in Excel)
Searching				Search for information within a single site, using browser-specific tools (e.g. 'find,, 'back') & site-specific tools (e.g. 'search', 'autocomplete'). Understand that search engines select pages according to index of keywords found in the content, and that they rank pages according to relevance		Use a range of search engines appropriate to finding information that is required. Understand that search engines can employ in-depth filters such as usage rights.	

Digital Literacy (DL)							
	EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Self-image and identity	recognise that I can say 'no' to somebody who asks me to do something that makes me feel sad, embarrassed or upset. Explain how this could be either in real life or online.	Recognise that there may be people online who could make them feel sad, embarrassed or upset. Give examples of when and how to speak to a trusted adult.	Explain and describe how other people's identity online can be different to their identity in real life. Give examples of issues online that might make them feel sad, worried, uncomfortable or frightened; give examples of how they might get help.	Understand 'identity' and explain they can represent themselves online in different ways; explain ways in which and why they might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media).	Explain how their online identify can be different to the identity they present in 'real life'; knowing this, describe the right decisions about how to interact with others and how others perceive them.	Explain how identity online can be copied, modified or altered.	Describe ways that media can shape ideas about gender. Identify messages about gender roles and make judgements based on them. Describe issues online that might make them or others feel sad, worried, uncomfortable or frightened and give examples of how they might get help, both on and offline. Explain why they should keep asking until they get the help I need.
Online Relationships	Recognise some ways in which the internet can be used to communicate.	Use the internet with adult support to communicate with people they know. Explain why it is important to be considerate and kind to people online.	Use and exemplify ways that the internet can be used to communicate with people they don't know well (e.g. email a penpal in another school/ country).	Describe ways people who have similar likes and interests can get together online. Give examples of technology-specific forms of communication (e.g. emojis, acronyms, text speak). Explain why they should be careful who they trust online and what information they give, and explain some risks communicating online with others they don't know well. Explain what it means to 'know someone' online and why this might be different from knowing someone in real life. Explain what is meant by 'trusting someone online' and explain why this is different from 'liking someone online'.	Describe strategies for safe and fun experiences in a range of online social environments. Give examples of how to be respectful to others online.	Explain that there are some people they communicate with online who may want to do them or their friends harm, and recognise that this is not their fault. Make positive contributions and be part of online communities.	Understand their responsibilities for the well-being of others in their online social group. Demonstrate how they would support others (including those who are having difficulties) online. Demonstrate ways of reporting problems online for both them and their friends.

Online reputation	Identify ways that I can put information on the internet.	Recognise that information can stay online and could be copied. Describe what information they should not put online without asking a trusted adult first.	Explain how information put online can last a long time. Know who to talk to if they think someone has made a mistake about putting something online.	Able to search for information about themselves online. Recognise they need to be careful before putting information and themselves of others online. Know who to ask if they are not sure if they should put something online.	Describe how others can find out information about them by looking online. Explain ways that some of the information about them online could have been created, copied or shared by others.	Search for information about an individual online and create a summary report of the information I find. Describe ways that information about people online can be used by others to make judgments about an individual.	Explain how they are developing an online reputation which will allow other people to form an opinion of them. Describe some simple ways that help build a positive online reputation.
Online bullying	Describe ways that some people can be unkind online and explain how this can make others feel.	Describe how to behave online in ways that do not upset others and give examples.	Give examples of bullying behaviour online, understand how it can make people feel and talk about how someone could get help online or offline.	Explain what bullying is and can describe how people may bully others. Describe rules about how to behave online and how they follow them.	Identify some online technologies where bullying might take place and describe ways people can be bullied through a range of media (e.g. image, video, text, chat). Explain why they need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation).	Recognise when someone is upset, hurt or angry online. Describe how to get help for someone that is being bullied online and assess when they need to do or say something or tell someone. Explain how to block abusive users. Explain how they would report online bullying on the apps and platforms they use. Describe the helpline services who can support them and what they would say and do if they needed their help (e.g. Childline)	Describe how to capture bullying content as evidence (e.g. screengrab, URL, profile) to share with others who can help me. Identify a range of ways to report concerns both in school and at home about online bullying.

Managing online information	Identify devices I could use to access information on the internet.	Describe and demonstrate how to get help from a trusted adult or helpline if they find content that makes them feel sad, uncomfortable worried or frightened.	Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real', and explain why some information they find online may not be true.	Explain the difference between a 'belief', an 'opinion' and a 'fact'.	Differentiate between opinions, beliefs and facts, and know what criteria have to be met for something to be fact. Describe and recognise some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups). Explain that some people met online may be computer programmes pretending to be real people. Explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true	Evaluate digital content and explain how they make choices from search results. Explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence. Understand the difference between online mis-information (inaccurate information distributed by accident) and disinformation (inaccurate information deliberately distributed and intended to mislead). Explain what is meant by 'being sceptical' and understand why it is important to be 'sceptical'. Explain what is meant by a 'hoax' and explain why it is important to think carefully before forwarding anything. Explain why information that is on a large number of sites may still be inaccurate or untrue.	Demonstrate strategies for being discerning in evaluating digital content. Describe how some online information can be opinion and can offer examples. Explain how and why some people may present 'opinions' as 'facts'. Define the terms 'influence', 'manipulation' and 'persuasion' and explain how these can be encountered online (e.g. advertising and 'ad targeting'). Demonstrate strategies to analyse and evaluate the validity of 'facts' and explain why using these strategies are important. Identify, flag and report inappropriate content.
Health, well-being and lifestyle	Identify rules that help keep us safe and healthy in and beyond the home when using technology.	Describe and explain rules to keep them safe when using technology both in and beyond the home.	Describe and explain rules to keep them safe when using technology both in and beyond the home, and say how these rules guide them	Explain why spending too much time using technology can sometimes have a negative impact on themselves, and give some examples of activities where it is easy to spend a lot of time engaged (e.g. games, films, videos).	Explain how using technology can distract from other things that should or need to be done. Identify times and situations when technology use may need to be limited, and suggest strategies for doing this.	Describe ways technology can affect healthy sleep and describe advice to promote healthy sleep accordingly.	Describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. Assess and action different strategies to limit the impact of technology on health (e.g. nightshift mode, regular breaks, correct posture, sleep, diet and exercise). Explain the importance of self-regulating use of technology and demonstrate strategies do this (e.g. monitoring time online, avoiding accidents)

Privacy and security	Identify some simple examples of my personal information (e.g. name, address, birthday, age, location). Describe the people I can trust and can share this with and explain why I can trust them.	Recognise examples of personal information (e.g. name, date of birth, family's names, school). Explain why they should always ask a trusted adult before sharing any personal information online and explain how passwords can be used to protect information and devices.	Describe how online personal information could be seen by others. Describe and explain some rules for keeping information private. Explain what passwords are and use passwords for accounts and devices.	Explain why they should only share information with people they choose to and can trust, and explain that if not sure or feeling pressured, a trusted adult should be asked.	Explain what a strong password is. Explain that others online can pretend to be them or other people, including friends, and suggest reasons why they might do this.	Create, use and secure passwords. Explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. Explain how and why some apps may request or take payment for additional content (e.g. in-app purchases) and explain why they should seek permission from a trusted adult before purchasing.	Use different passwords for a range of online services, and describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories). Explain what app permissions are and give some examples from the technology or services they use. Describe simple ways to increase privacy on apps and services that provide privacy settings. Describe ways in which some online content targets people to gain money or information illegally and describe strategies to help identify such content (e.g. scams, phishing).
Copyright and ownership	know that work I create belongs to me.	Explain why work they create belongs to them and save it so that others know it belongs to them.	Describe why other's work belongs to them, and recognise that content on the internet may belong to other people.	Explain why copying someone else's work from the internet without permission can cause problems, and give examples of these problems.	Explain why they need to consider who owns content that is searched for, whether they have the right to use it, and give examples.	Assess and justify when its acceptable to use the work of others, and give examples of content where it is permitted to be re-used.	Demonstrate the use of search tools to find and access online content which can be reused by others, and demonstrate how to make references to and acknowledge sources they have used from the internet.
Communication and collaboration		Show an awareness of how IT is used for communication beyond school (e.g. email, video calls, greetings cards).	Show an awareness of how IT is used for a range of purposes beyond school (e.g. editing and sharing digital photos, collecting and analysing data, communicating using email) and start to consider their advantages and disadvantages.	Use email, video conferencing and/or class blogs.	Work collaboratively with classmates on a shared project such as a class Wiki.	Work collaboratively with classmates on a class website or blog.	Use online tools to plan and carry out a collaborative project (e.g. plan App development project using online tools)

Impact:

At **St Francis CE Primary School**, the impact of our Computing curriculum is seen in confident, enthusiastic pupils who can use technology safely, creatively, and purposefully across their learning. A thorough implementation of the curriculum ensures that children develop the skills, knowledge, and understanding needed to thrive in a digital world, while reflecting our Christian vision that **"Every person matters, every person helps, every person succeeds"** and enabling them to **live life in all its fullness**.

Through our Computing curriculum:

- **Children learn in relevant and realistic contexts**, with a wide range of opportunities to explore, experiment, and apply their learning.
- **Pupils can articulate their understanding** of computing science, digital literacy, and information technology. They know how to stay safe online and can recognise acceptable and unacceptable behaviour.
- **There is consistency across year groups** in the quality, frequency, and progression of computing learning.
- **Children can cite examples** of how technology has enhanced access to learning in other areas of the curriculum.
- **Pupils talk enthusiastically about technology**, understanding how the digital age differs from that of older generations.
- **Children enjoy using technology**, approaching it safely and creatively, and are open and confident when encountering new or unfamiliar tools.
- **National Curriculum statutory requirements are fully met**, ensuring comprehensive coverage of computing objectives.
- **Teachers are confident and competent** in delivering the computing curriculum.
- **Curriculum links are made** across literacy, numeracy, and other subject areas, ensuring meaningful and integrated learning experiences.

By the time pupils leave St Francis CE Primary School, they are confident, competent, and responsible users of technology. They are equipped with the skills to access, create, and communicate information effectively, to apply technology across the curriculum, and to navigate the digital world safely, creatively, and positively, fully prepared to **live life in all its fullness**