Unlocking Every Child's Potential as a Unique Child of God

Year 4 Computing Curriculum 2025

Children Should be taught:

Co2/1.1 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

Co2/1.2 use sequence, selection, and repetition in programs; work with variables and various forms of input and output

Co2/1.3 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

Co2/1.4 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

Co2/1.5 use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

Co2/1.6 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.

Co2/1.7 use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Term 1 – Who let the Gods out?	Term 2 – Raiders & Invaders	Term 3 – Coasts
Online Safety – Lesson 1 & 2 Children will describe how to search for information and make judgements about its accuracy. They will investigate some methods used to encourage people to buy things online. **Word processing (Lessons 1-6)** Children will develop word processing, text formatting and touch-typing skills. They will be Introduced to important keyboard shortcuts, as well as simple editing tools within a word processor including bold, italics, and underline. They will check the accuracy of the work with spellcheck, consider layout and alignment as well as how to import tables and manipulate images. They will begin to consider audience and purpose and suggest ways to improve their work. **Programming: Further coding with Scratch (Lessons 1, 3,4)** Pupils will build upon prior knowledge of Scratch to develop an understanding of sprite positioning and orientation. They will use skills of decomposition to understand how a Scratch game works and learn what a variable is and how to make one. Furthermore, they will start to apply the four pillars of computational thinking to a range of real-world tasks and Scratch coding.	**Online Safety – Lesson 3** Children will learn that not everything they see online is true and make judgements about its veracity. **Computing systems and networks 2: *New* Computational thinking** (4 lessons: 1-4) This term, children will develop their computational thinking skills by applying decomposition and pattern recognition to solve problems. They will learn to explain and use abstraction by identifying key details within a task and design algorithms to support everyday activities. These skills will come together as they apply and reflect on their thinking while creating their own project using Scratch. **Computing systems and networks: Collaborative learning (Lessons 1,3,4,5)** Children will create rules to work collaboratively in a responsible and considerate way and investigate a range of collaborative tools. They will create an effective presentation, surveys and questionnaires and explore data with a shared spreadsheet.	**Online Safety – Lesson 4 & 5** Children will explain how technology can be designed to act like or impersonate living things. They will understand they may need to limit the amount of time they spend using it. **Creating media: Website design (Lessons 1-5)** Children will develop their research, word processing, and collaborative working skills whilst learning how web pages and web sites are created, exploring how to change layouts, embed images and videos and link between pages. **Data handling: Investigating weather (Lessons 1,3,4,5)** Pupils will research and store data using spreadsheets; design a weather station which gathers and records data and learn how weather forecasts are made. Children will then use tablets to present a weather forecast.
Key Vocab: Backspace, Bold, Copy, Copyright, Cut, Delete, Highlight, Home row, Home screen, Image, Import, Italics, Keyboard, Keyboard character, Keyboard shortcut, Keyword, Layout,	**Key Vocab:** debug, decomposition, logical, pattern recognition, remixing Collaborate, teamwork, link, document, software, insert, transition, presentation	**Key Vocab**: Audience, content, Google Sites, www., checklist, published, web page, collaboration, hyperlinks, tab, insert, embed, homepage, subpage, evaluate

Navigate, Paste, Redo, Search, Space bar, Text, Text effects, Touch typing, Underline, Undo, Word processing Code block, orientation, coordinates, negative number, sprite, decompose, conditional statement, variable, project, abstraction, computational thinking, pattern recognition, algorithm design	software, bar chart , spreadsheet, multiple choice, survey, average, numerical data,	Degrees Celsius, condensation, evaporation, extreme weather, sensor data, forecast, heat sensor, satellite,
Curriculum enhancement:	**Curriculum enhancement:**	**Curriculum enhancement:**

Essential Skills & Knowledge: • Find keys on a computer keyboard, type capital letters using 'shift' (not caps lock) identify that the keyboard is an important input device. • Typing and making simple alterations to text eg bold, italic using keyboard shortcuts. • Search for and find an appropriate image; import and alter an image in a document. • Understand how to use copy and paste shortcuts to copy text from one document to another; use different text styles and editing tools and credit source materials. • Create a simple script in Scratch - be able to change a sprite and prevent the sprite from rotating. • Recognise that a sprite may contain more than one script • Understand what decomposition is and apply it to solve problems. • Make a variable and store an answer to a question as a variable.	**Essential Skills & Knowledge:** • Know that problems can be solved more easily using computational thinking. • Recognise decomposition, abstraction, algorithm design and pattern recognition as key computational thinking skills. • Explain how decomposition and abstraction simplify problem-solving. • Identify patterns in problems and use them to solve problems. • Design clear algorithms and justify their choices. • Create logical sequences of steps to complete a task or project. • Use computational thinking skills to code, refine and evaluate their work. • Recognise what behaviour is appropriate when collaborating online. • Include images, text boxes, transitions and animations in presentation software. • Understand why a survey might be useful, create a Google form and share it with the class. • Export data to a spreadsheet; highlight data using conditional formatting and calculate averages and sums of numbers.	**Essential Skills & Knowledge:** • Know that a website is a collection of pages that are all connected. • Design and build a simple website and add content, using different features to make the page informative and interactive. • Show an awareness of audience in the work. • Understand the importance of data in weather forecasting and enter data in a spreadsheet. • Know that computers can use different forms of inputs to sense the world around them so they can record and respond to data. (sensor data) • Write an algorithm for an automated machine which uses selection. • Write & present a short video using appropriate language.

Year 4 E-Safety – Follow education for a connected world statements/Project Evolve.

It is important that learning outcomes are interpreted within contexts that are relevant to the learner's experience and are achieved through learning that is matched to the readiness of the learner.

Self-image and identity	Online relationships	Online reputation

I can explain how my online identity can be different to my offline identity. I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them. I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.	I can describe strategies for safe and fun experiences in a range of online social environments (e.g. **livestreaming**, gaming platforms). I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours. I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.	I can describe how to find out information about others by searching online. I can explain ways that some of the information about anyone online could have been created, copied or shared by others.

Online bullying	Health, well-being and lifestyle	Privacy and security
I can recognise when someone is upset, hurt or angry online. I can describe ways people can be bullied through a range of media (e.g. image, video, text, **chat**). I can explain why people 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).	I can explain how using technology can be a distraction from other things, in both a positive and negative way. I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time.	I can describe strategies for keeping personal information private, depending on context. I can explain that internet use is never fully private and is monitored, e.g. adult supervision. I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure. I know what the **digital age of consent** is and the impact this has on online services asking for consent.

Managing online information	Copyright and ownership

I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others. I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites). I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; **in-app purchases**, **pop-ups**) and can recognise some of these when they appear online. I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true. I can explain that technology can be designed to act like or impersonate living things (e.g. **bots**) and describe what the benefits and the risks might be. I can explain what is meant by **fake news** e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't.	When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.