St Paul's Adlington Primary School

Computing Knowledge & Skills Progression

Curriculum Intent

Our computing curriculum aims to develop confident, capable and responsible users of technology who understand key computing concepts and can apply them creatively and safely. Pupils build knowledge of computer science, information technology and digital literacy through a carefully sequenced curriculum that develops problem solving, logical thinking and digital creativity. Online safety and responsible use are central, ensuring pupils are prepared for learning and life in a digital world.

Curriculum Implementation

Computing is taught through a structured, progressive programme from EYFS to Year 6 that revisits and builds on prior learning across computer science, information technology and digital literacy. Teaching combines direct instruction, modelling and practical application using appropriate digital tools and coding environments. Online safety, vocabulary development and purposeful digital creation are embedded throughout, enabling pupils to practise, apply and refine their skills across a range of contexts.

Curriculum Impact

By the end of Year 6, pupils demonstrate secure understanding of core computing concepts and can design, create and debug programs with increasing independence. They use digital tools purposefully, evaluate online information critically and show responsible, safe online behaviour. Pupils can explain their thinking using correct vocabulary and apply their computing knowledge across the curriculum, showing confidence, resilience and good digital judgement.

Key Concepts

Algorithms - Decomposition - Abstraction - Logical reasoning - Sequence - Selection - Repetition - Variables - Data and information - Online safety and digital responsibility

Progressive Computing Vocabulary Spine

Phase	Core Vocabulary
EYFS	technology, computer, tablet, device, screen, keyboard, mouse, click, program, instructions, safe, online, internet, save, open
Y1	algorithm, program, code, instructions, sequence, debug, error, device, log in, password, private, search, digital content
Y2	algorithm, prediction, program, debug, logical, search engine, results, data, database, organise, retrieve, email, username
Y3	decompose, repetition, timer, event, network, internet, world wide web, communication, input, output, branch, database, safe sharing
Y4	selection, IF statement, variable, repetition, loop, LAN, collaboration, credibility, evaluate, filter, digital footprint
Y5	abstraction, sequence, selection, repetition, variables, WAN, ranking, source, reliability, audience, blog, privacy
Y6	nested structures, function, system, refine, simulate, manipulate data, bias, verification, digital identity, encryption, responsible use

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Computer Science

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Explore programmable toys and simple on-screen directions Follow and give simple instructions Begin to understand that instructions control outcomes	Understand that algorithms are sets of instructions Create and debug simple programs Predict outcomes of simple programs	Design simple algorithms for programs Create programs for a specific purpose Identify and correct simple errors Use logical reasoning to predict behaviour	Decompose problems into parts Use sequence and repetition in programs Begin using timers and simple loops Debug using logical checking	Use sequence, selection and repetition Use IF statements Introduce variables Trace and debug structured code	Combine sequence, selection, repetition and variables Design programs from decomposed problems Debug using systematic testing Explain how algorithms work	Use nested structures and functions Apply abstraction and decomposition independently Debug complex programs methodically Design programs to meet specific briefs

Information technology

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Use a range of digital devices in provision Create simple digital content Save and retrieve work with support	Create, organise and store digital content Retrieve saved work Use simple creative tools	Organise and retrieve digital data Use databases and pictograms Edit digital content including text and sound	Use search engines to find information Understand basic search processes Collect and present data digitally	Evaluate search results for usefulness Choose appropriate software for tasks Create linked digital content	Refine digital work based on feedback Combine multiple software tools Collaborate digitally	Design digital content for an audience Evaluate credibility of sources Create and publish digital projects

Digital Literacy

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise technology in everyday life Use devices safely with supervision	Identify technology uses beyond school Keep personal information private Know to tell an adult about concerns	Use technology respectfully Understand safe searching Recognise unkind online behaviour	Use secure passwords Understand online communication risks Know reporting routes	Understand digital footprints Recognise online risk types Evaluate trustworthiness	Understand privacy and data sharing Recognise misleading content Choose appropriate communication tools	Manage online identity Evaluate credibility and bias Demonstrate responsible digital behaviour

Online Safety

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Use technology safely with adult support Know to tell an adult if something worries them Begin to understand personal information	Know what personal information is Do not share passwords Identify trusted adults	Keep login details private Understand safe searching rules Report concerns to an adult	Create secure passwords Recognise unsafe communication Use platform reporting tools	Understand digital footprints Recognise content, contact and conduct risks Support others in staying safe	Understand data privacy risks Recognise manipulation and persuasion Use blocking and reporting tools	Manage digital identity and reputation Recognise scams and misleading content Know multiple reporting routes Act responsibly online

Year 7 Transition Summary

By the end of Year 6, pupils can design, write and debug structured programs using sequence, selection, repetition and variables. They understand networks, search credibility, data handling and digital collaboration. They demonstrate secure online safety knowledge, responsible digital behaviour and confident use of a range of digital tools. Pupils are prepared to access Key Stage 3 computing with secure foundational knowledge and vocabulary.

Christian Ethos and Responsibility

Computing is taught in a way that reflects the school's Christian values of responsibility, respect, honesty and care for others. Pupils are taught to use technology ethically, to communicate kindly and to consider the impact of their digital actions. Online behaviour is linked to moral responsibility, dignity and stewardship, encouraging pupils to act with integrity in digital spaces as well as in the physical world.