Computing Curriculum – St Cuthbert's Mayne Junior School – 2024/2025

Our Curriculum Vision – PRAY

Protecting our Planet – learn and contribute to protecting God's creation – in our community and wider work. Caring about the world we live in;	**R**esilience – be able to face challenges and use them to help us progress. Overcome difficulties that challenge us;	**A**spiration – we are created by God to do amazing things – each one of us. Ambitious / belief in ourselves and in what we can achieve.	**Y**es to equality – we are all equal and important in God's eyes. Everyone is equal and deserves to be valued and respected.
Digital responsibility – what is the environmental impact of technology Data Analysis for Environmental Awareness – understanding and visualising environmental challenges	Problem-Solving Skills – coding and programming tasks that require persistence and problem-solving and learning from failure Cybersecurity Awareness – online safety and how to navigate the digital world confidently and responsibly	Carer Awareness in Technology – highlighting potential cares in technology and computing Digital Citizenship and Leadership – encouraging pupils to take on leadership roles in digital projects	Inclusive Computing Content – lessons that highlight diverse contributions to technology Collaborative Work – promoting teamwork in computing tasks, ensuring that every student has a voice and an opportunity to contribute

Our Subject Philosophy

"Technology is the pen and paper of our time, and it is the lens through which we experience much of our world." - David Warlick

At St Cuthbert Mayne we use the Kapow Primary's Computing scheme which aims to instil a sense of enjoyment around using technology and to develop pupil's appreciation of its capabilities and the opportunities technology offers to, create, manage, organise, and collaborate. Tinkering' with software and programs forms a part of the ethos of the scheme as we want to develop pupils' confidence when encountering new technology, which is a vital skill in the ever evolving and changing landscape of technology. Through this curriculum, we intend for pupils not only to be digitally competent and have a range of transferable skills at a suitable level for the future workplace, but also to be responsible online citizens.

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The requirements of the National Curriculum

'The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems, and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world'.

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
- 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
- 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Therefore, the Kapow Primary scheme of work is designed with three strands which run throughout:

- Computer science
- Information technology
- Digital literacy

It is then organised into five key areas, creating a cyclical route through which pupils can develop their computing knowledge and skills by revisiting

and building on previous learning:

- Computer systems and networks
- Programming
- Creating media
- Data handling
- Online safety

The implementation of Kapow Primary Computing ensures a broad and balanced coverage of the National curriculum requirements, and the 'Skills showcase' units provide pupils with the opportunity to learn and apply transferable skills. Units have been created to link to other subjects such as science, art, and music to enable the development of further transferable skills and genuine cross curricular learning.

To transition effectively to this scheme of work, in the current academic year 2023-24, we are following a structured 'catch up' plan: all year groups have two catch-up units to build a solid foundation of essential knowledge and skills before proceeding to the intended units and lessons for the year group. The catch-up units are made up of selected lessons taken from a range of units in the previous year groups. By the 2024-25 academic year, we will be following Kapow's curriculum.

E-Safety forms an integral part of safeguarding in our school. Key themes and messages are reinforced to pupils through RSE and PSHE as well as through regular whole school assemblies. We encourage parents and carers to develop their own knowledge and understanding of e-safety through regular bulletins.

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Computing Long term plan:

Curriculum Map 2024-25 (condensed Kapow)						
Condensed LTP	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Introduction to Google Classroom and learning apps Online safety	Networks	Journey inside a computer	Using iPads	Programming: Scratch	Catch-up
Year 4	Revision of Google Classroom and learning apps including times tables Online safety	Collaborative Learning	Further Coding with Scratch	Investigating Weather	Computational thinking	Catch-up
Year 5	Revision of Google Classroom and learning apps Word processing skills Online safety	Search Engines	Mars Rover 1	Stop Motion animation	Programming Music	Catch-up
Year 6	Revision of Google Classroom and learning apps Word processing skills Online safety	Bletchley Park	Big Data 1	History of computers	Intro to Python	Catch-up

Curriculum Progression at St Cuthbert's Mayne Junior School

The document below gives an overview of the skills and knowledge covered in each year group and strand and how these develop through our 'condensed' Computing scheme of work, for those using our Computing: Long-term plan - condensed version.

Please note that the Condensed long-term plan does not cover all the skills and knowledge covered in the Kapow full scheme of work. It does, however, ensure that children are given opportunities to work towards all the attainment targets set out in the National Curriculum.

Condensed-Computing-Progression-of-KSAV-30.08.22-1.pdf