Computing Curriculum – St Cuthbert Mayne Junior School – 2023/2024

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.

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.

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

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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

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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:

<table>
<tr>
<td colspan="7" style="background:blue;color:white;text-align:center">Curriculum Map 2023-24 (transitioning to Kapow / condensed)</td>
</tr>
<tr>
<td>Transitioning to Kapow

Condensed LTP</td>
<td>Autumn 1</td>
<td>Autumn 2</td>
<td>Spring 1</td>
<td>Spring 2</td>
<td>Summer 1</td>
<td>Summer 2</td>
</tr>
<tr>
<td>Year 3</td>
<td>Introduction to Google Classroom and learning apps
E-safety</td>
<td>E-safety</td>
<td>Catch up unit 1 (selected lessons from units in previous year groups)</td>
<td>Catch up unit 2 (selected lessons from units in previous year groups)</td>
<td>Computing systems and networks: networks (1,3,5)

Programming: Scratch (1,2,3 and 5)</td>
<td>Computing systems and networks: Journey inside a computer (1,2,5)

Data handling: International Space Station Y2 (1,3,5)</td>
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Year 4	Revision of Google Classroom and learning apps including times tables E-safety	E-safety	Catch up unit 1 (selected lessons from units in previous year groups)	Catch up unit 2 (selected lessons from units in previous year groups)	Computing systems and networks (2,3) Further coding with Scratch (1,2,3) Computational thinking (1,2)	Creating media: Website design (1,2,3,4,5) Data Handling: investigating weather (1,2,3,4,5)
Year 5	Revision of Google Classroom and learning apps Word processing skills E-safety	E-safety	Catch up unit 1 (selected lessons from units in previous year groups)	Catch up unit 2 (selected lessons from units in previous year groups)	Computing systems and networks: Search engines (1,2,3,4) Programming 1: music (1,2,3,4)	Creating media: Stop motion animation (1,2,3,4) Data handling: Mars Rover (1,2,4)
Year 6	Revision of Google Classroom and learning apps Word processing skills E-safety	E-safety	Catch up unit 1 (selected lessons from units in previous year groups)	Computing systems and networks: Bletchley Park (1,2,3) Creating media: History of computers	Catch up unit 2 (selected lessons from units in previous year groups)	Programming: Introduction to Python (1,2,3,4) Data Handling: Big Data 1 (1,3,4,5)

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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