Subject on a Page

Computing

At St. Cuthbert's we recognise and value the importance of computational thinking and creativity as vehicles to change our world and ensure our curriculum fosters meaningful links with communication, mathematics, science, DT, art and PSHE

Intent: What do we want for all our pupils?

Through our curriculum and cross curricular learning, we want our pupils to develop a curiosity, resilience and creative approach to their computational learning. We want them to be digitally literate and develop a skillset that leads effectively into KS3 and beyond as well as becoming conscientious citizens in a digital world. Our children will:

develop an understanding of computer systems and networks

learn and practise the skill of adapting & writing programs & algorithms

become responsible digital citizens who understand how to remain safe online

learn how information is collected, recorded, stored, presented and analysed

create and edit a range of digital content to share with others

benefit from a carefully sequenced curriculum with strong links to KS3

Implementation: How we sequence & teach our computing curriculum

Curriculum Design

High quality and adaptive computing teaching at St Cuthbert's is our ultimate goal and our curriculum design enables our teachers to deliver this as it provides detailed and adaptable planning and resources which link to other curriculum areas to give learning meaning and purpose. Our curriculum is reviewed and if needed altered annually to reflect the needs of the cohort, safeguarding advice relating to online safety and changing software and hardware. From September 2023 are in a transition process from a Google School to Office 365 and our curriculum will reflect that. Our scheme of work fulfils the National Curriculum and alongside PSHE provision it covers the Education for a Connected World framework.

The curriculum is carefully sequenced so that units of work build on prior learning and revisit the key areas above. Our end points for KS2 closely align with BCCET vision for computing meaning our pupils leave us more than equipped to further their learning at KS3 in our feeder schools.

	Ongoing	CS	P	DH	CM	IT
EYFS		CS: Using a computer	P: All about instructions	CS: Exploring Hardware	P: Beebots	DH: What is data?
Year 1	Online Safety & Digital Literacy	CS: mouse skills	P: Algorithms and Bee Bot	DH: introducing data: pictograms	CM: digital images and art	P: Algorithms and Bee Bot
Year 2	CS: inputs & outputs	P: Algorithms & debugging	P: Scratch Jnr	CS: Word Processing	CM: Animated ebooks	DH: plant growth
Year 3	CS: Networks	CS: email	Online Safety	P: Scratch Loops	DH: databases	CM: video trailers
Year 4	CS: collaboration	CM: website design	Online Safety	P: Scratch variables	P: Computational Thinking	DH: weather
Year 5	CS: search engines	P: music using scratch	Online Safety	P: Microbit	CM: Animations	DH: Mars Rover
Year 6	DH	CS: Bletchley Park	Online Safety	DH	P: Scratch Nested Loops & Logo	CM: History of Computers

CS: Computer Science & Networks | P: Programming | DH: Data Handling | CM: Creating Media | IT: Information Technology

Teaching & Learning

Our teaching and learning takes place using a variety of hardware and software. We have laptops, tablets, chrome books, Beebots and micro:bits in school on which children can learn. From September 2023 we will be making the transition to Office 365 and so have invested in resources to support teachers and pupils in making the change including new laptops and KAPOW resources. This new system and the associated programmes are new to us all and so our curriculum will be adapted by staff so that children are best supported. We subscribe to Purple Mash which enhances our computing curriculum and enables pupils to embed skills in cross curricular learning.

Our lessons are inclusive - every child is able to achieve no matter their ability or individual needs. We adapt learning to the needs of our pupils through questioning, modelling and, where necessary, breaking down tasks and providing scaffolds or guides. Staff are supported in delivering computing through a dedicated HLTA and technician who offer support and training, through online training and also through collaborating with colleagues at BCCET to develop a curriculum which ensures our pupils are ready for KS3. The use of technology is also well embedded across other curriculum areas with software and hardware being used to support skills and progression in many different subjects.

Lesson Design

Lesson design varies according to the unit of work but most units will include opportunities for:

Recall of previously taught knowledge

Exploring new hardware, software or systems

Planning, designing and creating

Refining - debugging, correcting and editing

Communicating learning and ideas

Evaluating own learning and products

Impact: How do we assess our computing curriculum?

Ongoing formative assessment is essential in supporting pupils with their knowledge and understanding of units of work. Teachers are skilled in using use modelling, scaffolding and questioning to support this. All lessons begin with a recap from previous lessons and units and enable staff to know which pupils know and remember their learning. Reasoning and problem solving are integral parts of computing and staff value and encourage children to learn from their mistakes and develop resilience when improving and refining their work in computing.

At the end of each unit of work, teachers use agreed 'end point' criteria to make a broad overall judgement of attainment in that unit of work as follows:

EXCEEDING EXPECTATIONS: Pupils who are exceeding the expectations will typically be providing evidence of achievement which consistently extends their learning beyond the confines of the task. They show deeper understanding and mastery than their peer group.

MEETING EXPECTATIONS: Pupils who are meeting expectations in full will typically show consistent evidence of achievement which shows they understand and confidently approach tasks and topics. They are working at an appropriate level for their peer group.

NOT YET MEETING EXPECTATIONS: Pupils not meeting expectations may be showing weaknesses or less confidence in some areas or may have needed adaptive teaching or scaffolds to achieve.

The computing coordinator monitors teaching and learning in computing through the Bishop Chadwick CET 5 strand approach.