







# Computing and E-safety Curriculum

At St Thomas of Canterbury, our intention is to engage our children in a high quality, rich computing environment to prepare them for the ever changing technological world around them. Through our curriculum we aim to develop responsible users of technology who can work confidently and independently with any challenge that may face them.

The approach is based around six principles:

**1. Belief** that every child can and will achieve. **2. Focus** on reasons why children can succeed, rather than excuses about why they will fail. **3. Preparedness** to make a cultural shift. **4. Awareness** that the children's life chances depend on success in English. **5. Ability** – fixed ideas are removed about innate ability. Opportunities rather than genetics. **6. Potential** to learn in increased through effort.

INTENT	IMPLEMENTATION	IMPACT
 <p><b>Alignment to National Curriculum</b></p> <p>As a school, we have chosen the Purple Mash Computing Scheme of Work from Reception to Year 6. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise standards and allow all pupils to achieve their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and integrates perfectly with the 2Simple Computing Assessment Tool. Furthermore, it gives excellent supporting material for less confident teachers.</p>	 <p><b>Pedagogical Approaches</b></p> <p>The pedagogical approaches to the teaching of computing in the school are closely aligned to the approaches and principles of teaching in other subject areas, with the key elements being:</p> <ul style="list-style-type: none"> <li>• Teachers ensuring that pupils see the 'purpose' of each lesson and the content in relation to their lives</li> <li>• Deliberate and intentional retrieval of previous knowledge to build on previous learning</li> <li>• Regular checkpoints and formative assessments within lessons to tailor lessons to the needs of pupils</li> <li>• Exceptionally positive relationships in school that create the conditions conducive to effective learning</li> <li>• High levels of subject knowledge</li> <li>• Making reference to the school rules, values, and the class purpose and culture when teaching; this supports pupils to contribute and engage in lessons and be part of a class community striving to unlock each member's potential.</li> </ul>	 <p><b>Approach to Assessment</b></p> <p>The government framework includes eight different aspects of online education. These are: self-image and identity; online relationships; online reputation; online bullying; managing online information; health wellbeing and lifestyle; privacy and security; copyright and ownership. With the ever increasing usage of technology in society our curriculum requires each child to achieve mastery in each of these aspects to ensure that they are responsible, competent, confident and creative users of information and communication technology whilst understanding how to stay safe and behave whilst online. Formative assessment will take place throughout a lesson to check children's understanding before moving on. Children are also encouraged to discuss their knowledge with their peers to pass on their understanding. Children are not summatively assessed but Purple Mash allows us to collate children's work at the end of every lesson. This is stored on an online data base and allows teachers to access work from each lesson. Gaps in children's learning or misconceptions are revisited ensuring that no children fall behind. The impact of the curriculum will be rigorously monitored and further developed by the subject lead through reference to the Subject Development Plan, close work with the Computing Link Governor and will be referred to and reported upon in the termly Head of School Report to the Governing Body and the termly Pupils and Curriculum committee meeting..</p>
 <p><b>End Points</b></p> <p>We are very clear about being ambitious in all year groups and the programme is designed to take the children to greater depth within the statutory assessment frameworks.</p> <p><b>Key Stage 1</b> – In Reception and Key Stage 1, children are taught to use equipment and software confidently and purposefully, to create, organise, store and communicate, to handle information and program digital devices. Children will explore and grasp new concepts in a concrete way through physical activities like role play, games or using floor robots. This will provide a foundation for becoming a computational</p>	 <p><b>Teachers' Expert Knowledge</b></p> <p>Teachers have been given access to CPD opportunities at school through Purple Mash. The subject leader provides regular updates about upcoming events, such as Safer Internet Day etc. and developments in the computing curriculum. The culture of the school is one that promotes openness and honesty and all teachers are confident that they will be supported with any subject knowledge they feel as though they are missing.</p>	 <p><b>Performance Data</b></p> <p>The government framework includes eight different aspects of online education. These are: self-image and identity; online relationships; online reputation; online bullying; managing online information; health wellbeing and lifestyle; privacy and security; copyright and ownership. With the ever increasing usage of technology in society our curriculum requires each child to achieve mastery in each of these aspects to ensure that they are responsible, competent, confident and creative users of information and communication technology whilst understanding how to stay safe and behave whilst online. Formative assessment will take place throughout a lesson to check children's</p>

thinker and learning new concepts in Key Stage 2, which can be more abstract when taken to the screen. **Key Stage 2** – Our children will extend their use of computing in communication, creativity and programming. The children will learn more in depth about Computer Systems and Networks. They will work to understand how to communicate safely and become a good digital citizen. The units are sequenced to ensure progression is being made and the more difficult concepts are being taught as they progress through the school, especially in programming. Our planned curriculum for digital literacy, which includes online safety, is broad in covering a range of issues including understanding current issues such as ‘fake news’, ‘body image’ and how to use social media responsibly.



#### Sequencing

Our computing curriculum follows a spiral structure therefore key concepts are revisited and taken to a greater level of depth year upon year. The first concept taught is computer science followed by information technology and finally digital literacy. E-safety is a key feature that runs throughout the year.



#### Addressing Social Disadvantage

We have a firm belief that every child can achieve and that they are entitled to the same knowledge and cultural capital, whatever their background or starting point. As such, we adopt a mastery approach to all of our teaching, having high expectations of all children and scaffolding those with lower starting points to be able to access and achieve these.

In Computing, this means using regular assessment to ensure that all children have access to the same base of knowledge, and back-tracking to embed prior knowledge if required.

All children use technology regularly, so that regardless of their experience outside of school they will all have access to the same equipment.



#### Promoting Discussion and Understanding

Having clearly defined skills to be learnt in each teaching session supports teachers in delivering high-quality lessons that lead to high-quality outcomes for all learners.

Every year follows the same sequence of themes: Coding and computational thinking>Spreadsheets>Internet and e-mail> Art and Design>Music>Databases and graphing>Writing and presenting>Communication and networks  
As a school we use the themes of Purple Mash to ensure the children have the skills needed to achieve as they progress through school. The themes remain the same for each year, with skills being built on year to year.



#### Knowing More and Remembering More

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. 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.

Pupil attainment is assessed using the 2Simple Computing Assessment Tool for Years 1 to 6. The tool



#### Pupils' Work

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#### Talking to Pupils

As the computing curriculum is so hands on, it gives teachers a chance to have discussions with children on a regular basis. They can discuss their ideas, reasoning and problems with the teacher in a more informal manner which leads to more success. Children love to talk about their work and none more so than in computing.



#### Local Context

At our School, we aim to enable all children to achieve to their full potential. This includes children of all abilities, social and cultural backgrounds, those with disabilities, EAL speakers and SEN statement and non-statemented. We place particular emphasis on the flexibility technology brings to allowing pupils to access learning opportunities, particularly pupils with SEN and disabilities. With this in mind, we will ensure additional access to technology is provided throughout the school day.



#### Teacher Assessment

enables staff to accurately identify attainment of pupils through the detailed exemplification it has for each key learning intention. Teachers keep accurate records of pupil attainment by entering data using the 2Simple Computing Assessment Tool. Tracking of attainment by using the 2Simple Computing Assessment Tool is used to inform future planning. Children are encouraged to self, peer and group assess work in a positive way using online collaborative tools such as 2Blog in Purple Mash. Formative assessment is undertaken each session/interaction in Computing and pupils are very much encouraged to be involved in that process. Through using the progression of skills documents and displays from 2Simple, both teachers and pupils can evaluate progress.

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