



Computing Curriculum Statement

Intent

At Streethay Primary School, we believe a high-quality computing education equips all children, including children with SEND, with the skills and knowledge in computational thinking and creativity to help them to understand the world that they live in and be able to be ambitious, successful young people. Computing is a significant part of everyone's lives, and we believe that children should be at the forefront of new technology to complement and enhance their learning and experiences in a broad and balanced way.

At Streethay we use iCompute which supports schools in teaching computing effectively and well by providing a rich computing curriculum fully mapped to the EYFS Framework and National Curriculum for Computing at Key Stage 1 and 2.

At Streethay we use a mastery approach which covers all three strands of the computing curriculum:

1. Computer Science – Pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.
2. Information Technology – Pupils are equipped to purposefully create programs, systems and a range of content in order to develop products and solutions. They will be able to collect, analyse, evaluate and present data and information.
3. Digital Literacy (incl. E-Safety) – Pupils are taught to use, access and express oneself through digital technology, including a critical understanding of technology's impact on the individual and society, at a level suitable for the future and as active participants in a digital world.

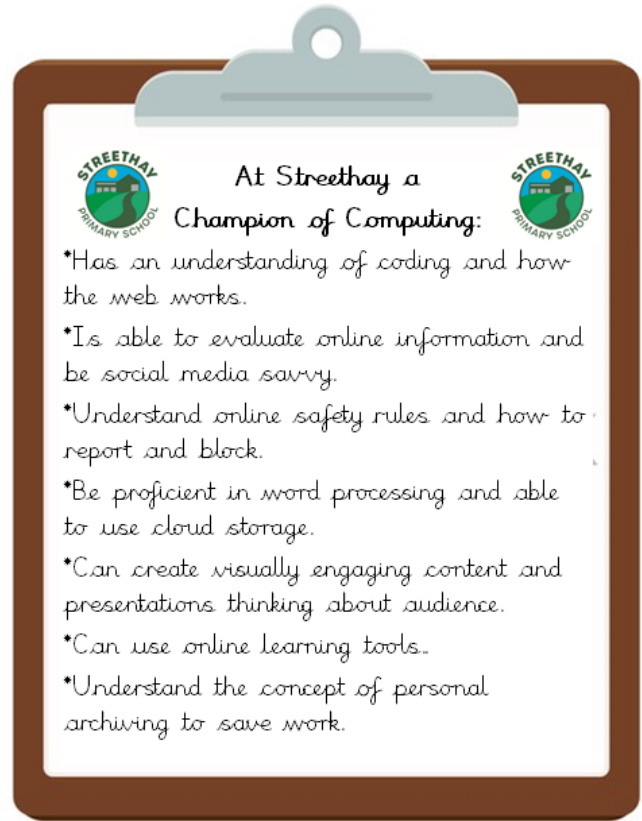
At Streethay we aim to enhance pupils' enjoyment, resilience, understanding and attainment in computing by delivering a quality computing education with comprehensive computing schemes of work that are designed for computing mastery. We want the children to acquire a deep, long-term, secure, and adaptable understanding of the subject. It is demonstrated by how skilfully a child can apply their learning in computing to new situations in unfamiliar contexts. At Streethay we offer every child appropriate learning opportunities to enjoy and succeed in computing. We use growth mindset and problem-solving approaches that enable pupils to develop resilience, persistence and confidence. All children are encouraged to believe in their ability to master computing and are empowered to succeed through curiosity, tinkering and perseverance.

Our computing lessons are taught through whole-class interactive teaching with pupils working together on the same lesson content at the same time. Lessons are sequenced so that concepts are developed in logical steps with particular attention given to fundamental concepts. This ensures that all children can master concepts before moving to the next stage, with no pupil left behind. Curriculum equity is offered with all pupils being given the time and opportunity to fully understand, explore and apply skills and ideas in different ways and in different situations. This enables pupils to fully grasp a concept and understand the relevance of their learning.

Implement

Pupils participate in weekly Computing lessons in order to achieve the intent of the Computing and E-safety curriculum at Streethay Primary. In addition to stand-alone lessons, skills taught are incorporated into other subjects, given the cross curricular nature of computing. Lessons are delivered using a range of devices and through un-plugged activities where necessary. The delivery of computing and E-safety at Streethay is planned in line with the National Curriculum and allows for clear progression as children move through each stage of their education with us.

Teachers use 'iCompute' as a scheme to support their planning and delivery, which caters for all children, including those with SEND. Each year, children are taught the three main components of computing (Computer Science, Digital Literacy and Information Technology). This allows children to build on and





progress from their previous experiences, developing their skills, vocabulary and understanding in order to be active, responsible digital participants. We have also identified key skills that are required to access and achieve key objectives within the curriculum. E-safety is referred to in every computing unit, in addition to discrete units taught in the Autumn term for each class. Our PSHE curriculum also contributes to our delivery of e-safety. Our E-safety lessons build on prior knowledge and are adapted/modified to suit the requirements of the pupils within the class and current issues that may be relevant.

At Streethay, we strive to engage parents and carers with the importance of safe and responsible behaviour online and hold meetings and assemblies each year with relevant content and support materials. Pupils also take part annually in 'Internet Safety Day', following the suggested theme, which reflects current issues. We recognise the need to continually maintain, update and develop resources to ensure the effective delivery of the National Curriculum and support the use of technology throughout the school.

This includes:

- Interactive whiteboards in every classroom to enhance and promote effective use of technology for learning.
- 30 ipads for pupil use within lessons for Year 3 and onwards, to use in both discrete lessons and across the wider curriculum.
- 15 ipads for pupil use within lessons for Years 1 and 2, to use in both discrete lessons and across the wider curriculum.
- 1 ipad in each classroom as an additional resource to support teaching and learning.
- A range of programmable devices such as BeeBots.
- Data Loggers to collect and analyse data.
- Subscription to online content such as iCompute, TTRockstars, Numbots and online reading materials to promote learning in school and remotely through home access.
- The use of 'Microsoft Teams' to promote and support communication and collaboration across the curriculum.
- We also have a school Twitter account and class Twitter accounts. Here they can communicate with their teachers and peers to further extend their learning opportunities. See Social Networking Policy/eSafety.

Lessons are planned to provide for and include all children, including those with SEND, greater depth pupils, pupils with EAL needs and pupils from all social and cultural backgrounds. Pupils without home access are supported and catered for accordingly.

In Key Stage One, children will learn to understand what algorithms are, how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. They will be taught how to create and debug simple programs and use logical reasoning to predict the behaviours of simple programs. They will be shown how to use a range of technology purposefully to create, organise, store, retrieve and manipulate digital content as well as recognise common uses of technology beyond school. They will be taught to use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

In Key Stage Two, the children will build on their knowledge and experience from Key Stage One and will design, write and debug programs that accomplish specific goals by decomposing them into smaller parts. They will use sequence, selection and repetition in programs, use logical reasoning to explain how some simple algorithms work and correct errors in their own and existing programs. Pupils will be taught to understand computer networks, including the internet, and the opportunities they offer for communication and collaboration. They will use search technologies effectively, learn to appreciate how results are selected and ranked, and be discerning in evaluating digital content. Pupils will be taught to select, use and combine a variety of software (including internet services) on a range of digital devices to create a range of programs, systems and content that achieve given goals. They will be taught to use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour and be clear how to identify a range of ways to report concerns about content and contact to keep themselves and others safe.

Impact

In Computing we build on prior learning and lessons are sequenced throughout the primary phase for progression where all learning builds towards clearly defined end points: end of unit, end of year, end of Key Stage.

We encourage discussions between staff and pupils to help the children best understand their progress and their next steps. We also encourage pupils to document their own learning in pupil portfolios on Showbie. These online journals can also be used to showcase and celebrate computing work as well as providing evidence of the pupil's knowledge and digital skills.



We constantly monitor to ensure the children have learnt the things we have taught them and if they are struggling, we can introduce additional support the next time they encounter that objective. Impact is about how we know what we are teaching is making a difference. If children are keeping up with the curriculum, they are deemed to be making good or better progress.

We measure the impact of our curriculum through the following methods:

- Pupil discussions and interviewing the pupils about their learning (pupil voice).
- Online pupil journals and assessment/feedback on content creation via Showbie.
- Photo evidence of the pupils practical learning.
- Video analysis through recording of performance or practical learning in lessons.
- Pupil self-reflection.
- A reflection on standards achieved against the planned outcomes (progression/what to observe in learning).
- Learning walks and reflective staff feedback (teacher voice).
- Dedicated Computing leader time.
- Formative and summative approaches.

As a result of effective implementation, pupils will be able to apply their skills and knowledge in other areas of learning. Pupils will be able to share their knowledge of how to be a responsible user of technology through discussion when questioned. They will be prepared for the next stage in their lives, knowing how to be a responsible user of technology in the wider world and most importantly, know where to seek support. Pupils will be familiar with and will discuss their understanding of the three main strands and will know key vocabulary associated with these. Confidence in this subject will also mean that pupils are able to be more independent and competent in life skills such as problem solving and logical thinking.

Identifying Pupils who are gifted within Computing.

All staff have high aspirations to challenge and motivate children of all abilities. In Computing, pupils who are identified as gifted are challenged within lessons in school and are additionally offered external workshops and challenges; as well as encouraged to attend extra-curricular activities. To help identify pupils who are gifted, the following markers have been adapted:

- Sees and suggests new solutions and opportunities within lessons.
- Demonstrates curiosity and resilience when using technology.
- Uses new apps/technology (hardware/software) at home to further learning.
- Uses own skills and knowledge to help support (and 'teach') peers.
- Uses technology to help solve problems and understands when it also creates problems.
- Considers the limitations of technology and looks for ways to overcome these limitations.
- Considers the purpose to which information is processed and communicated and how the characteristics of different kinds of information influence its use.
- Uses technology in innovative ways to support learning in other subjects.
- Understands the positive impact using technology has in supporting the learning of less able children.
- Uses skills and knowledge of Computing to design, create and 'debug' programs when only given a specified outcome.
- Continually refining solutions to improve work or the content they have created.
- Consider some of the social, economic and ethical issues raised by the use of technology both in and out of school.

At Streethay, we know we have created a champion of computing if they can:

- *Have an understanding of coding and how the web works.
- *Is able to evaluate online information and be social media savvy.
- *Understands online safety rules and how to report and block.
- *Be proficient in word processing and able to use cloud storage.
- *Create visually engaging content and presentations thinking about audience.
- *Use online learning tools.
- *Understands the concept of personal archiving to save work.



Nurture. Inspire. Prepare

