Computing Intent, Implementation & Impact Policy

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To be reviewed:	**Every 2 years**
Review dates:	
Amendments:	

Intent

At Turton and Edgworth Primary School, we intend to deliver a Computing curriculum that allows our children to 'have life and life in all its fullness' (John 10:10). We will provide an outstanding, rich and broad curriculum in our caring Christian environment. We aspire for all to reach out to the wider community and world, as they achieve their full potential academically, socially, culturally and spiritually.

In order to achieve our vision, we intend to equip our children with the computational thinking, creativity, understanding and skills necessary to participate and achieve in a rapidly-changing world where work and leisure activities are increasingly transformed by technology. Our children will be digitally competent and will have a range of transferrable skills. Also, we intend 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. Due to the ever evolving and changing landscape of technology, we also intend to develop pupils' confidence when encountering new technologies and to ensure that they are responsible online citizens.

At Turton and Edgworth Primary School, we intend to deliver a curriculum that enables pupils to meet the following aims in the National Curriculum:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Our curriculum will also enable pupils to meet these End of Key Stage Attainment Targets that are outlined in the National Curriculum:

By the end of Key Stage 1 pupils should be taught to:

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school

- 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

By the end of Key Stage 2 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.

- Finally, in Computing, we intend to provide learning opportunities that match the needs of all children and that enable all children to make progress. In doing so, we will celebrate all successes in out happy, inclusive and aspirational school, embedding the Christian values of forgiveness, thankfulness respect and love in all that we do.

Implementation

Our computing curriculum is centred around the 'Kapow Primary Computing' scheme of work. In line with the National Curriculum, the Kapow scheme of work is designed with 3 strands that run throughout it: Computer Science, Digital Literacy and Information Technology. It is then organised into 5 key areas, creating a cyclical route through which pupils can develop their computing knowledge and skills by revisiting and building on previous learning:

*Computing 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 their 'Skills showcase' units provide pupils with the opportunity to learn and apply transferable skills. Here meaningful 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.

Within the scheme, lessons incorporate a range of teaching strategies from independent tasks, paired and group work as well as unplugged and digital activities. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Differentiated guidance is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required.

Also, to ensure that our staff deliver a highly effective and robust computing curriculum, in each of their units Kapow Primary Computing include teacher videos to develop subject knowledge and support ongoing CPD. Strong subject knowledge is vital and Kapow has been created with the understanding that many teachers do not feel confident delivering the computing curriculum; therefore, every effort has been made to ensure that they feel supported to deliver lessons of a high standard to ensure pupil progression.

As a school, we have adapted the Kapow Primary Computing scheme of work to reflect teaching and learning in our school. Within our 'Computing Curriculum Long-term Overview' you can see that we have weaved the teaching of online safety throughout the curriculum. At the start of each half term, all classes will start their new unit with an online safety lesson to ensure that this is taught consistently throughout the year and remains at the forefront of our children's minds so that they become responsible, online citizens. Also, to raise the profile of Online Safety amongst our parents and the wider community, we retweet the weekly '#WakeUpWednesday; tweets from 'National Online Safety'.

In order to deliver the computing curriculum, class teachers have a 1-hour computing lesson timetabled each week. During this lesson, discrete computing objectives are taught and individual classes have the sole use of both the computing suite and bank of iPads. As well as planning discrete computing lessons, teaching staff ensure that they plan opportunities for the children to use and apply their new computing skills, knowledge and understanding in cross-curricular contexts; therefore, strengthening their Digital Literacy and widening their contextual use of Information Technology.

Impact

The impact of the Kapow Primary Computing scheme and teaching in computing can be constantly monitored through both formative and summative assessment opportunities. Within the Kapow scheme, each lesson includes guidance to support teachers in assessing pupils against the learning objective and each unit has a quiz and knowledge catcher which can be used at the end of the unit to assess learning. The results from these summative assessments will be scanned in and saved in the children's folders as evidence.

As well as using the assessment tools within Kapow, staff will record and track our children's progress and attainment using Target Tracker. Using the above, it is the responsibility of the Computing Subject Lead to monitor and use these assessments to track whole school progression and attainment in Computing and to also evaluate, review and celebrate good practice.

Through using the Kapow Primary Computing scheme, pupils should leave our school equipped with a range of skills to enable them to succeed in their secondary education and be active participants in the ever-increasing digital world.

The expected impact of this scheme is that children will:

- Be critical thinking and able to understand how to make informed and appropriate digital choices in the future.
- Understand the importance that computing will have going forward in both their educational and working-life and in their social and personal futures.
- Understand how to balance time spent on technology and time spent away from it in a healthy and appropriate manner.
- Understand that technology helps to showcase their ideas and creativity. They will know that different types of software and hardware can help them achieve a broad variety of artistic and practical aims.
- Show a clear progression of technical skills across all areas of the National Curriculum – computer science, information technology and digital literacy.

- Be able to use technology both individually and as part of a collaborative team.
- Be aware of online safety issues and protocols and be able to deal with any problems in a responsible and appropriate manner.
- Have an awareness of developments in technology and have an idea of how current technologies work and relate to one another.
- Meet the end of key stage expectations outlined in the National Curriculum for Computing.

As well as the above, when measuring the impact of Computing in school, we will see that children are enthused and engaged within their learning both in lessons and outside of lessons, attending extra-curricular clubs which engage their interests and love for learning in Computing.