TUTSHILL CHURCH OF ENGLAND SCHOOL

Computing Policy

Love One Another, Know Ourselves, Believe and Grow'

Written: October 2022
Review: October 2024

Signed Headteacher……

Our Christian Vision is rooted in 1 John 4:7
'Dear Friends, let us love one another, for love comes from God'

Signed Committee chair……

Introduction

Our Curriculum focuses on ensuring that all our children have the best chance to achieve our Christian Vision; Love One Another, Know Ourselves, Believe and Grow.

Our School Vision is rooted in 1John 4:7 *'let us love one another, for love comes from God'.*

Tutshill C of E Primary School is an inclusive school where all people are valued and nurtured to flourish and become the best version of themselves and responsible members of God's family.

Curriculum Drivers

Throughout each subject that we teacher we want to ensure that children leave Tutshill School ready for the next chapter of their life. Therefore, we want our children to:

- understand and use our school values
- be resilient and curious learners
- be globally aware
- be able to play a role in wider society

Subject intent

At Tutshill C of E, we offer a structured sequence of lessons to ensure coverage of the skills required to meet the aims of the national curriculum. Delivered through our core Christian Values, we provide opportunities for children to show creativity, develop perseverance and show responsibility when using technology. The content of our curriculum allows for a broad, deep understanding of computing and how it links to children's lives, allowing children to apply the fundamental principles and concepts of computer science. Computing is differentiated through our understanding of meta-cognition as an awareness of an individual's own thought processes and ability to reflect on the way that they think and learn. Using our Learning Behaviours, children develop analytical problem-solving skills and learn to reflect, evaluate and apply when using information technology. It also enables them to become responsible, competent, confident and creative users of information technology. Children are given opportunities to research important individuals and topics which have helped shape the world, showing the real impact of Computing on everyday life and our understanding of it. This in turn helps to inspire children to become the next generation of Computer Scientists and innovators preparing children for the responsibilities and experiences of later life. It also develops children's global awareness; teaching how Computing both reflects and contributes to an awareness of British Values culture and creativity. Kapow Primary's Computing scheme 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 our 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.

Legal Framework

This policy has due regard to statutory legislation and guidance including, but not limited to, the following:

- DfE (2013) 'National curriculum in England: Computing programmes of study'
- DfE (2017) 'Statutory framework for the early years foundation stage'
- Equalities Act 2010

Roles and Responsibilities

Governing Board

- Link Governor will meet with the subject leader to be able to understand the programme of study.

The headteacher is responsible for:

- Holding the subject leader to account for pupils' attainment.
- Assisting the subject leader in reviewing and updating this policy annually.
- Supporting the subject leader in identifying CPD opportunities for themselves and classroom teachers.
- Promoting the needs of all pupils and ensuring they can access a well-rounded and inclusive curriculum.

The subject leader is responsible for:

- Preparing policy documents, curriculum plans and schemes of work for the subject.
- Attending training courses and undertaking CPD opportunities for themselves.
- Reviewing changes to the national curriculum and advising staff on new developments and assisting in their implementation.
- Working with classroom teachers to plan lessons and ensure continuity and progression from year group to year group.
- Monitoring the learning and teaching, providing support for staff where necessary.
- Encouraging staff to provide effective learning opportunities for pupils.
- Helping to develop colleagues' expertise in the subject.
- Organising the deployment of resources and carrying out an annual audit of all resources.
- Liaising with teachers and holding them to account for the attainment achieved.
- Communicating developments in the subject to all teaching staff.
- Leading staff meetings and providing staff members with the appropriate training.
- Organising, providing and monitoring CPD opportunities in the subject.
- Ensuring common standards are met for recording and assessment.
- Advising on cross-curricular and extra-curricular activities.

- Collating assessment data and setting new priorities for development of geography in subsequent years.
- Identifying areas for improvement and ensuring these are included in a subject specific action plan and form part of the SDP.
- Liaising with subject leaders from local Primary and Secondary Schools.

The classroom teacher is responsible for:

- Working with the subject leader to ensure the high-quality delivery of the curriculum and continuity between year groups.
- Acting in accordance with Tutshill C of E School policies.
- Ensuring progression of pupils' skills with due regard to the national curriculum.
- Planning engaging and interesting lessons, ensuring a range of teaching methods are used to cover the content of the national curriculum.
- Monitoring the progress of pupils in their class and reporting this on an annual basis.
- Reporting any concerns regarding the teaching of the subject to the subject leader or a member of the senior leadership team (SLT).
- Undertaking any training that is necessary in order to effectively teach the subject and improve practice.
- Reporting on pupils' progress at parents' evenings and in end of year reports.

The Specialist Educational Needs and Disabilities Co-ordinator (SENDCO) is responsible for:

- Liaising with the subject leader in order to implement and develop the subject throughout the school.
- Organising and providing training for staff for pupils with special educational needs and disabilities (SEND).
- Advising staff how best to support pupils' needs.
- Advising staff on the inclusion of objectives in pupils' individual education plans.
- Advising staff on the use of teaching assistants in order to meet pupils' needs.

The Curriculum

Early Years Foundation Stage

Computing is incorporated into all areas of the EYFS. Effective teaching and learning provides children with the opportunity to play and explore, participate in active learning and create and think critically.

National Curriculum

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.

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.

Subject Implementation

Our weekly lessons contains revision, analysis and problem-solving. Through the sequence of lessons each term, we intend to inspire pupils to develop a love of the digital world and see its place in their future. Cross-curricular links are also important in supporting other areas of learning. In Key Stage One, the focus is on developing the use of algorithms, programming and how technology can be used safely and purposefully. In Key Stage Two, lessons still focus on algorithms, programming and coding but in a more complex way and for different purposes. Children also develop their knowledge of computer networks, internet services and the safe and purposeful use of the internet and technology. Data Handling is featured more heavily in Upper Key Stage Two and skills learnt throughout the school are used to support data presentation.

The Kapow Primary scheme is 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 The implementation of Kapow Primary Computing ensures a broad and balanced coverage of the National curriculum requirements, and our ‘Skills showcase’ units provide pupils with the

opportunity to learn and apply transferable skills. Where 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. 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. Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary. Strong subject knowledge is vital for staff to be able to deliver a highly effective and robust computing curriculum. Each of our units of lessons include teacher videos to develop subject knowledge and support ongoing CPD. Further CPD opportunities can also be found via our webinars with our Computing subject specialists. Kapow has been created with the understanding that many teachers do not feel confident delivering the computing curriculum and every effort has been made to ensure that they feel supported to deliver lessons of a high standard that ensure pupil progression.

Assessment and reporting

Throughout the year, teachers will plan on-going assessment opportunities in order to gauge whether pupils have achieved the key assessment criteria.

- Assessment in Computing is based upon knowledge and understanding, rather than achievement in English or maths.
- Formative assessment, which is carried out informally throughout the year, enables teachers to identify pupils' understanding of subjects and informs their immediate lesson planning.
- In terms of summative assessments, the results of end of year assessments will be passed to relevant members of staff, such as the pupil's future teacher.
- Parents will be provided with a written report about their child's progress during the summer term every year.
- Verbal reports can be provided at parental consultations during the Autumn and Spring terms.
- Pupils with special educational needs and disabilities (SEND) will be monitored by the special educational needs coordinator.

<u>Assessment will take place through the following ways</u>

- Summative end of unit assessment will be undertaken termly
- Pupil's understanding will be assessed through focused questioning and Assessment for Learning strategies
- Progress will be reported to parents annually

Health and Safety

All staff will act in accordance with the schools Health and Safety policy.
Staff immediately will report any concerns to the Office Manager and Executive Headteacher, Deputy Headteacher in Heads absence.

Risk assessments are completed and carried out as required.
We have a robust E-Safety policy as well as online E-Safety units taught every term. For Safer Internet Day in February, we have a school focus on the key elements and top tips.

Equality statement

- All pupils will have access to the geography curriculum, including practical experiments.
- Gender, learning ability, physical ability, ethnicity, linguistic ability, cultural circumstances and/or any other factors, will not impede pupils from accessing all Computing lessons.
- Where it is inappropriate for a pupil to participate in a lesson because of reasons related to any of the factors outlined above, the lessons will be adapted to meet the pupil's needs and alternative arrangements involving extra support will be provided where necessary.
- All efforts will be made to ensure that cultural and gender differences will be positively reflected in all lessons and teaching materials used.
- We aim to provide more academically able pupils with the opportunity to extend their computational thinking through extension activities such as problem solving, investigative work and research.

Subject Impact

At Tutshill C of E, learning in computing will be enjoyed across the school. Children use digital and technological vocabulary accurately, alongside a progression in their technical skills. They are confident using a range of hardware and software and produce high-quality purposeful products. Children see the digital world as part of their world, extending beyond school, and understand that they have choices to make. They are confident and respectful digital citizens going on to lead happy and healthy digital lives. The impact of Kapow Primary's scheme can be constantly monitored through both formative and summative assessment opportunities. Each lesson includes guidance to support teachers in assessing pupils against the learning objectives and each unit has a unit quiz and knowledge catcher which can be used at the start and/ or end of the unit. After the implementation of Kapow Primary Computing, pupils will leave 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 following the Kapow Primary Computing scheme of work is that children will be critical thinkers and able to understand how to make informed and appropriate digital choices in the future. They will understand the importance that computing will have going forward in both their educational and working life and in their social and personal futures. Children will understand how to balance time spent on technology and time spent away from it in a healthy and appropriate manner. They will 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. Children will show a clear progression of technical skills across all areas of the National curriculum - computer science, information technology and digital literacy. They will be able to use technology both individually and as part of a collaborative

team and be aware of online safety issues and protocols and be able to deal with any problems in a responsible and appropriate manner. They will have an awareness of developments in technology and have an idea of how current technologies work and relate to one another and meet the end of key stage expectations outlined in the National curriculum for Computing.