



Ancaster

Church of England Primary School

Computing Policy

Vision Statement

In the spirit of St. Martin, the Centurion Saint, we are a welcoming and inclusive community where every individual is celebrated. As we journey together through exploration and learning, our curriculum strives to promote local and global citizens who realise they have the power to change. Our high expectations for all, underpinned by our core Christian values of Wisdom, Courage and Respect, allow us to challenge everybody to be the best they can be.

Be the Best You Can Be!

Wisdom Courage Respect

How does our Christian Vision impact upon computing at Ancaster?

We have chosen 4 Guiding Lights which are inspired by our Church School Vision. Below is an explanation of how each of these guiding lights impacts upon the teaching and learning of computing at Ancaster.

Inclusivity- Every child is deserving of a full and complete computing curriculum where the modern world has transformed into digital age. In every lesson, there is appropriate and tailored differentiated learning that caters for the needs of each and every individual. Children are given support, guidance, modelled examples and are challenged to develop key skills, knowledge and vocabulary linked with each computing area of the curriculum by ensuring they understand what they need to do and what the next steps in learning are. This will ensure every child's needs are met. No-one is exempt from an education in learning about the online world as well as programming, coding, connecting, publishing and creating within a digital platform. Every child, no matter their age, is exposed to learning about computing and how the digital world works and connects within our lives. The priority of computing at Ancaster is to build up a child's understanding of computing, what the computing curriculum can offer an individual as well as how to stay safe and act accordingly before they leave their Primary Education and enter Secondary Education.

Exploration- Through innovative and creative lessons, all individuals will be able to have a better understanding and access of computing. Children will explore the online world, look to develop their coding practice and how computer tools function and link within programming. Enquiry questions and activities are set-up for children to access and engage in to explore how areas of computing work and how to build-up and perform skills within ICT programs. Children will be encouraged to evaluate their learning, discuss how functions have worked and question what needs to happen next by asking further questions of practice and conduct. Using key vocabulary alongside practice will be fundamental to confidence when accessing and responding to digital tasks, scenarios and challenges. Through E-safety week, children will explore the positives and fallbacks of using and being a part of the online world as well as steps and measures to take to continually keep ourselves and others safe.

Empowerment- Learning about and exploring technology is very apt and an important part of a child's education in the 21st century. We take pride in giving the children time to grow their understanding to new heights when tackling current issues and keeping the children up-to-date with the latest knowledge globally around internet and computer use. It is vital that a child feels empowered, supported and wise to be the best users of computing that they can be through the use of a carefully constructed curriculum that is skills progressive. We want to build within the children to never be afraid to give something new a go – despite how 'new' or 'unknown' it may be.

Values Led- At Ancaster, our children regularly demonstrate many important values that we hold highly within the teaching and learning of computing. A priority at Ancaster is to develop well-rounded individuals that know the difference between right and wrong in the use of technology. Wisdom as pupil learners and citizens of the world is imperative through the developing nature of our progressive curriculum that builds creativity and excitement in the use of technology. Children will need to be courageous when accessing new areas of computing and to have the willingness, perseverance and the mind-set of always giving a task a go. In all classrooms across our school, our deep-rooted mutual respect for one another and our school can be clearly seen, this creates an environment where pupils feel safe and supported throughout their learning journeys.

Introduction

At Ancaster Church of England Primary School, we are committed to providing a curriculum which is broad and balanced, and provides our children with exciting learning opportunities in order for them to gain essential knowledge, skills and understanding whilst fostering their curiosity. We intend that all children should enjoy their learning, achieve their potential to be the best they can be and become independent life-long learners. Our curriculum is underpinned by the National Curriculum for Key Stages 1 & 2 (2014) and the

Early Years Foundation Stage Framework (2021) as well as a range of carefully mapped enrichment opportunities designed to enable learning to be revisited and applied in new contexts.

Computing at Ancaster is taught through a programme by NCCE (National Centre for Computing Education) which is called Teaching Computing. This programme allows for non-specialist teachers to follow sequential lessons and provides all children with the lifelong skills that will enable them to embrace and utilise new technology in a responsible and safe way.

Statement of Intent

Ancaster understands that ICT and computing are an integral part of the national curriculum and that ICT skills are important beyond the classroom. With technology playing a pivotal role in the children's lives, it is crucial that we model and educate our children on how to use technology positively, responsibly, and safely. Our curriculum aims to equip children with positive experiences and foundations in order to flourish and thrive in a technology-led world. It ensures that children have the opportunities to operate technology in the 21st century workplace, facilitating future career opportunities that will be open to them if they study computing at a greater level. We want to ensure all children become autonomous users of computing technology, acquiring confidence and enjoyment from their education. Further, we ensure that technology is used to support learning across the entire curriculum, and it is accessible to every child that also stretches beyond the academic. We want each child to be digitally aware and competent users of technology through our computer science lessons to enable them to problem-solve and become critically minded thinkers.

Legislation and Guidance

This policy reflects the requirements of the National Curriculum programmes of study, which all maintained schools in English must teach. This policy has due regard to all relevant legislation and statutory guidance including, but not limited to, the following:

- DfE (2018) 'Keeping children safe in education'
- Data Protection Act 2018
- General Data Protection Regulation (GDPR)
- Equality Act 2010
- DfE (2013) 'Computing programmes of study: key stages 1 and 2'

This policy operates in conjunction with the following school policies:

- E-safety Policy
- Data and E-security Breach Prevention and Management Plan
- Data Protection Policy
- Cyberbullying Policy
- Technology Acceptable Use Agreement for Pupils
- Technology Acceptable Use Agreement for Staff
- Equal Opportunities Policy

Roles and Responsibilities

Headteacher

The headteacher is responsible for ensuring that this policy is adhered to, and that:

- the policy is consistently implemented across the school;
- the amount of time provided for teaching the required elements of the curriculum is adequate and is reviewed by the governing board;
- identifies a Computing Lead;
- the school's procedures for assessment meet all legal requirements;
- the governing board is fully involved in decision-making processes that relate to the breadth and balance of the curriculum;

- proper provision is in place for pupils with different abilities and needs, including children with SEN.

Computing Lead

The role of the subject leader is to:

- provide a strategic lead and direction for the subject;
- keep themselves and other staff up-to-date with developments in their subject by relevant reading, INSET and policy development;
- support and offer advice to colleagues on issues related to the subject;
- support staff development and improve the quality of teaching and learning over time;
- monitor pupil progress in that subject area by working alongside colleagues, book scrutiny, pupil interviews, lesson observations and planning scrutiny;
- monitor and evaluate teachers' plans and quality of teaching and learning;
- liaise with appropriate bodies e.g. other schools, governors, the LEA about matters relating to their subject
- provide efficient resource management for the subject.

All staff

All staff will ensure that the school curriculum is implemented in accordance with this policy.

Curriculum Implementation

Computing lessons are taught through a knowledge-based curriculum in a sequential and progressive manner which covers, revisits and embeds every element of the computing curriculum. Computing is carefully mapped across six units throughout the year, providing coverage in line with the National Curriculum. Links to other areas of the curriculum are identified eg Digital Lifestyles learning from our PSHE curriculum. The Teach Computing curriculum is structured into sequential units for each year group, and the content of each unit is broken down into separate lessons. Knowledge and skills within each unit can generally be taught in any order, with the exception of *programming*, where concepts and skills rely on prior knowledge and experiences. Further, lessons must be taught in numerical order, built in to form an innovative progression framework. The units for key stages 1 and 2 are based on a spiral curriculum. This means that each of the themes is revisited regularly (at least once in each year group), and pupils revisit each theme through a new unit that consolidates and builds on prior learning within that theme. This style of curriculum design reduces the amount of knowledge lost through forgetting, as topics are revisited yearly. It also ensures that connections are made even if different teachers are teaching the units within a theme in consecutive years.

The knowledge and skills are progressively mapped in sequential units to build year on year, which will deepen and challenge our learners. This allows for retrieval opportunities, which are carefully planned and scaffolded to strengthen and recall previously taught knowledge.

EYFS

Children will engage in their learning through the characteristics of effective teaching and learning.

The three characteristics of effective teaching and learning are:

- Playing and exploring – children investigate and experience things and have a go
- Active learning – children concentrate and keep on trying if they encounter difficulties and enjoy achievements
- Creating and thinking critically – children have and develop their own ideas, make links between their ideas and develop strategies for doing things

Children will be exposed to technology prior to starting primary school and they will have ample opportunities to engage with technology through their learning such as individual log on to Rising Stars Reading Platform, individual pupil log ins to pupil laptops, use of iPads, unplugged algorithms through giving directions and use of beebots.

KS1 and KS2

In KS1; the children will 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

In KS2; the children will 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

Organisation and Planning

Long Term Plans

Our curriculum is carefully mapped in long term plans to ensure that pupils acquire identified knowledge, vocabulary and skills in a sequential and progressive manner ensuring coverage across each subject within the curriculum. New learning is based upon what has been taught before and prepares pupils for what they will learn next. We know that if our pupils are learning our curriculum, they are making progress and are being prepared for the next stage of their educational journey both within our school and beyond.

Throughout the curriculum delivery, opportunities are given for children to be able to revisit, recall and apply the knowledge and skills taught to support their retention of this learning and their understanding to become successful confident learners. This is done through the regular use of retrieval tasks and three Wow Days per year which provide our children with the opportunity to revisit and celebrate their learning from across the that term. Our enrichment opportunities, such as visits and visitors, enable the children to retrieve this learning and apply in real-life situations beyond the classroom where applicable.

Our curriculum is delivered using a variety of approaches and resources depending on the nature of the subject being taught and the needs of the children. For specific details about individual subjects please see the relevant policy for each subject.

Subject Overviews and Yearly Plans

Our Subject Overviews are created from our Long-Term Plans by our Subject Leaders for each individual subject to show the key learning in that subject across the school, setting out how it builds on what has been taught previously. Our Yearly Plans set out the learning of each year group for the academic year in each subject area across the curriculum, including enrichment opportunities. All curriculum documentation outlined above is available on our website.

Quality First Teaching

Our lessons have been designed using Rosenshine's Principles of Instruction to incorporate a focus on retrieval of prior learning so that children know more and can remember more as well as the explicit teaching of identified vocabulary to extend spoken and written language. Mastery principles also ensure that new learning is presented in small chunks with children given the opportunity to learn new content through explicit teaching and modelling, guided and independent practice which meets their differing needs. (Our children understand this process as I do, We do, You do). This enables teachers to identify misconceptions and address them at this point of learning. Information gained by teachers at the end of each lesson, as outlined in our Feedback Policy, enables gaps and/or misconceptions to be identified and subsequent lessons to be re-shaped to address these aspects. All lessons begin with a learning question which allows the children to understand exactly what they are learning in that lesson and how it links to knowledge they learned earlier in the year, in another subject in the current year or the previous time it was taught to them. Lessons end with a review section which enables the children to re-visit the learning question and carry out an exit task which allows them and the teacher to determine their learning in that lesson.

We use our Church School Values (Respect, Wisdom and Courage) to further promote positive attitudes to learning and leading a successful, meaningful life.

Teaching and Learning

Cross-curricular Links

At Ancaster, we are aware that IT and computing skills should be developed through core and foundation subjects. Where appropriate, IT and computing should be incorporated into schemes of work for all subjects and should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding. Our school provides pupils with opportunities to enrich and deepen learning using cross-curricular approaches - embedding computing in English, Mathematics and Science from Year 1 to Year 6. In EYFS, computing is embedded in their continuous provision through play.

Equipment and Resources

In order for the children to access the computing curriculum, we have a class set of iPads, with the latest software and specifications and a set of 15 laptops.

Provision for SEND, Pupil Premium, High attainers

The Teach Computing Curriculum has been written to support all pupils. Each lesson is sequenced so that it builds on the learning from the previous lesson, and where appropriate, activities are scaffolded so that all pupils can succeed and thrive. Scaffolded activities provide pupils with extra resources, such as visual prompts, to reach the same learning goals as the rest of the class. Exploratory tasks foster a deeper understanding of a concept, encouraging pupils to apply their learning in different contexts and make connections with other learning experiences. As well as scaffolded activities, embedded within the lessons are a range of pedagogical strategies which make computing topics more accessible.

Health and Safety

All children are taught to handle equipment correctly and to switch computers on and off using the correct procedures. The dangers of electricity are stressed. All electrical wires are covered and secure. Children are not to connect or unplug electrical equipment. All IT equipment is PAT tested on a yearly basis.

All users are also reminded of the need to take regular breaks when using electrical equipment.

Equal Opportunities

It is our policy to ensure that all children, regardless of race, class or gender, should have the opportunity to develop computing and ICT capability. We aim to respond to children needs and overcome potential barriers for individuals and groups of children by ensuring that all children follow the scheme of learning for Computing. We ensure that we provide curriculum materials and programmes, which are in no way class, gender or racially prejudice or biased. We provide opportunities for our children who do not have access at home to use the school computers/Internet to develop independent learning. Further, we provide suitable challenges for more able children, as well as support for those who have emerging needs, which we encourage greater independence.

Impact

Assessment and Reporting

Our long term planning documents for Computing ensure progression within the curriculum. It is from these identified learning experiences which teachers will assess their children as being 'working towards', 'working at' or 'working at greater depth' with regards to Age Related Expectations (ARE) and which is reported in an annual end of year written report for parents/carers.

Monitoring, Evaluation and Review

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching through a range of monitoring activities such as observation of teaching and learning, scrutiny of children's work and conversations with teachers and children about their work. The subject leader is also responsible for supporting colleagues in the teaching of computing, keeping staff informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school. The headteacher will ensure this policy is reviewed.