# Computing Policy

## Christian Vision

Building strong foundations for a happy and successful life

Like the wise man who built his house on rock (Matthew 7: 24-27), we seek God's wisdom to enable us to nurture our school community so that all can flourish and achieve their best in every aspect of school life.

## Intent

At Lewknor Primary, the curriculum our children experience enables us to live out our school's vision: **Building strong foundations for a happy and successful life.** We aim to enable *all* our children to build strong foundations in all subjects, regardless of background or disposition. We aim to offer a rich and informed curriculum packed with opportunities for *all* children to *flourish, succeed* and *achieve* in the digital 21st century.

The use of digital technology, especially computers and computer systems, is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world where there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content, we explicitly teach children the skills and knowledge they need to become creative, digitally literate, computational thinkers.

## Aims:

At Lewknor Primary, in age and stage-appropriate ways, we aim to ensure that all children:

- experience a computing curriculum which is **meaningful, motivating and memorable**
- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to participate fully in the technological world in which they live
- are increasingly able to participate fully in a digital world, understanding the positive aspects of the online world in which they live whilst being aware of the negative impact and how to deal with issues that may arise

## Implementation

The computing curriculum at Lewknor C of E Primary has been carefully sequenced to focus and build upon the three core aspects of Computing; *Digital Literacy, Computer Science, and Information Technology.* Through our computing curriculum which follows the National Centre for Computing Education (NCCE) Teach Computing scheme of work, the children will learn a range of skills and knowledge to become digitally literate and understand how to use technology safety. This scheme has been sequenced to our school to enable current learning to be founded upon prior development of relevant knowledge, skills and understanding. It has also been created to maximise cross-curricular links with other subject areas in order to make our children's learning as meaningful as possible within exciting, relevant topics. The EYFS foundation stage framework helps to begin this process, laying strong, relevant foundations for the National Curriculum aims.

**EYFS**

Children in the Early Years Foundation Stage have access to a range of technology, including tablets and Bee-Bots, within their continuous provision. They also have access to iPads and laptops. Children will have experiences using a range of technology for a variety of purposes in both child-initiated learning and adult-led activities.

**Key Stage 1**

During Key Stage 1, children will use a range of technology in school and learn how to stay safe whilst using this. They will explore why different technology is used for different purposes and recognise common uses of information technology beyond school. Children will develop their understanding of basic subject-specific vocabulary relating to specific technology, coding and online safety.

Children will learn how to become digitally literate by using a range of technology safely and understand the need to keep information private. They will learn what is meant by the term online safety and know who to speak to if they are concerned about something they have seen or heard online.

Children will learn about what algorithms are and know how these can be implemented whilst using technology and also through unplugged devices to develop their computer science skills. Children will learn the importance of following step-by-step instructions to achieve a required outcome and will be able create and debug simple programs.

The children will learn about the purposes of a range of technology and why some technology is used for certain tasks to develop their understanding of information technology. The children will have opportunities to browse appropriate websites safely, create digital media and understand how technology is used for data and information. Through this, the children will learn how technology can be used to find out information. The children will also have the opportunity to explore ways of organising their work and findings using a range of programs such as Microsoft Office and Scratch.

**Key Stage 2**

During Key Stage 2, the children develop their confidence and abilities when using a range of technology and will have the opportunities to design, write and debug programs to achieve specific goals. The children will understand how to keep themselves and others safe online, understand the need to keep personal information private and know ways to report concerns about content and contact. The children will work on the subject-specific vocabulary taught in Key Stage 1 and learn new terminology.

During Key Stage 2, children will continue to develop their knowledge and skills to become more digitally literate by learning about behaviours that are acceptable and unacceptable online and the risks associated with these. The children will spend time exploring what could be classed as a risk to them and others online and understand that they have choices to make when it comes to these. Throughout the key stage the children will have opportunities to discuss what they have seen on the internet and evaluate how accurate and authentic the information is that they find online.

Children will extend their knowledge of computer science skills by using their knowledge and understand of algorithms to create their own by making predications, repetition and experiment with different variables. The children have opportunities to write their own and explain how it works along with solving any problems that occur along the way. The children will continue to explore a range of software and technology and use the most appropriate based on a specific purpose for this. The children will learn how to collect a range of data and will learn the skills needed to organise and present the data using different programs. Throughout the key stage children will also explore animation and learn how to produce films/ animation and edit it.

## Planning

All planning outlines the knowledge, skills and understanding expected for each objective covered. At Lewknor Primary, we have our computing journeys mapped out which ensure progression and opportunities to build upon prior knowledge. Computing is taught around a set of key concepts:

1. Computing systems and networks: (systems, networks and how they are used, the internet, hardware and software)
2. Programming: (interpreting, creating and evaluating algorithms, programming to accomplish specific goals, detecting and correcting errors)
3. Data and information: (collecting, analysing, evaluating, presenting data and information)
4. Creating media: (design and development, communicating and collaborating online, evaluating online content, respectful and responsible communication, presenting, creating content)

As part of the work on each key concept, children also explore and learn about:

- The effective use of tools
- The impact of technology
- Safety and security
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## Assessment

Formative assessment is used throughout computing to inform immediate next steps as well as future learning. Parents are informed of their child's attainment in computing in end-of-year reports and are also encouraged to be involved in their child's learning, for example, if topic homework activities are set.

## Monitoring

The impact of the computing curriculum is monitored regularly by the computing lead through pupil discussions, samples of work, discussions with teachers and lesson observations. This is then used to develop subject action plans. The computing lead regularly audits provision and staff training and plans training based on the needs of the staff.

## E-Safety

Due to the increasing importance and ever-changing nature of online safety, a separate online safety policy has been created.

## Equal Opportunities

All pupils regardless of race or gender shall have the opportunity to develop skills using computers and other related technology. The school will promote equal opportunities for computer usage and fairness of distribution of ICT resources. The class teacher differentiates work by task, resource or support, to ensure the individual needs of More Able and SEND pupils are met. The school is aware that not all pupils have the same access to computers at home and this is considered by staff in the planning and delivery of the curriculum.

## Inclusion

No pupils are excluded from computing. We ensure that all pupils take part and that, wherever possible, any individual needs, such as mobility, are tackled in planning. Teaching assistants and support staff, work as directed by the teacher.

## **Impact**

The curriculum in computing has been created to ensure that children become successful of technology and not slaves to it. We want to ensure our computing lessons are meaningful and therefore motivating and ultimately memorable. We aim to enable our children to develop a love for their learning in computing and the practical ways it can enhance the world around us and their experience of it.

Finding the right balance with technology is key to an effective education and a healthy lifestyle. The way we implement computing helps children to recognise this balance.

The progression within a unit is evident in a range of ways: class books, individually saved work, group work and discussions. The work the children produce provides evidence of creative, technical and practical expertise to perform everyday tasks confidently and to participate successfully in an increasingly technological world. It also shows a growing repertoire of knowledge, understanding and skills in order for children to value and enjoy the curriculum we deliver.

In age-appropriate ways, children select from a range of devices and applications. They use a range of strategies to record and communicate their learning and verbal feedback is given to have a positive impact on children's outcomes which are focused on this particular area of the curriculum. Finished work may be displayed for a range of events.

Outcomes are assessed in relation to the National Curriculum descriptors during and at the end of units, with summative levels being given at the end of each term. The subject leader analyses this data and feeds back successes and areas for development into the normal school improvement cycle, including feeding back to governors. Children's work is moderated internally.