OAKDENE PRIMARY ACADEMY
COMPUTING POLICY

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Document History	
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At Oakdene Primary Academy, we strive to deliver a high-quality computing curriculum which allows our pupils to recognise the significance of digital technology in their everyday lives. We explicitly teach pupils the skills and knowledge they need to become creative, digitally literate, computational thinkers. This policy sets out a framework within which teaching and non-teaching staff can work and gives guidance on planning, teaching and assessments.

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, there now exists a wealth of software, tools and technologies that can be used to communicate, collaborative, express ideas and create digital content. At Oakdene Primary Academy, we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning of how computer systems work, programming, creative media and data and information. This provides our pupils with the skills necessary to become digitally literate and participate fully in the modern world. Where possible, we make explicit links with mathematics and science to enhance our computing curriculum further.

Aims

The overall aim for computing is for pupils to become computer scientists and be digitally literate along with enriching learning for all pupils and to ensure that teachers develop confidence and competence to teach computing and plan cross curricular STEM activities to support the pupils.

The National Curriculum for computing aims to ensure that all pupils:

• 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 communications technology.

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Computing offers opportunities for pupils to:

• Develop their ability to apply their digital literacy capability to support their use of language and communication skills;

 • Develop their digital literacy capability and understand the importance of information and how to select and prepare it;

• Develop their computational thinking – the ability to solve problems in a creative, logical and collaborative way – is developed through repeated programming opportunities and opportunities to build understanding and apply the concepts of computer science;

• Become responsible, competent, confident and creative users of information and communication technology;

• Explore their attitudes towards Computing, its value for themselves, others and society and their awareness of its advantages, risks and limitations;

• Develop skills involved in computer science, digital literacy and information technology;

● Grow an awareness of how technology is used in the world around them and of the benefits that it provides;

• Communicate and collaborate in order to develop understanding of the purposes for using technology and these are used to bring together home and school learning experiences;

• Engage all pupils imaginatively and widen their learning opportunities

● Develop an understanding of how to use technology safely and the risks associated.

Curriculum

The children undertake a broad and balanced programme that considers children's abilities and needs, as well as their emotional and intellectual development. Through computing, the children will learn a range of skills and knowledge to become digitally literate and understand how to use technology safely.

Oakdene Primary Academy follows the Enquire Learning Trust Computing Scheme with every child accessing weekly computing lessons within the school's computing Suite or via a portable/handheld device.

We follow this bespoke scheme of work, using its cyclical structure to ensure our pupils know more, remember more and are able to do more with their computing knowledge and skills across multiple operating systems.

Early Years

Pupils in the Early Years Foundation Stage have access to a range of technology, including tablets and Bee-Bots, within their continuous provision and have access to iPads as required. Pupils in the early years will have experiences using range a of technology for a variety of purposes in both child-initiated learning and adult-led activities. Opportunities for technology as a tool to support learning and teaching in all areas are identified in planning.

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

Pupils 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 what algorithms are and know how these can be implemented whilst using technology and also through the use of 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 to create and debug simple programs.

The children will learn about the purposes of a range of technologies and why some technology is used for certain tasks, in order 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 both find out and present information. The children will also have the opportunity to explore ways of organising their work and findings using a range of programs such as the Microsoft Office Suite.

By the end of Key Stage One, children will have a knowledge of how to open, save, retrieve and edit documents with a clear naming and filing system.

Key Stage 2
During Key Stage 2, the children develop their confidence and abilities when using a range of technologies and will have 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 pupils will work on their understanding of subject-specific vocabulary taught in Key Stage 1 and learn new terminology.

During Key Stage 2, pupils 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 the accuracy and authenticity of the information that they find online.

Pupils will extend their knowledge of computer science skills by using their knowledge and understand of algorithms to create their own, by making

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predictions, repeating and experimenting with different variables. The children have opportunities to write their own algorithms and explain how they work along with solving any problems (debugging) that occur along the way.

The pupils will continue to explore a range of software and technologies and use the ones that they consider to be the most appropriate, based on specific criteria. 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 plan, create, produce and edit films and animations.

Within Key Stage 2, children have the ability to change their password to access their personal storage area (Network Login). This promotes the concept of safety and privacy. They are taught about the presence of the school's Firewall as a tool to keep them safe online. This runs alongside e-safety lessons which promote the need for making the right decisions online.

Computing Curriculum Planning

At Oakdene Primary Academy, computing is taught around a set of key concepts and second order concepts. A range of key concepts are explored through each computing unit. These concepts include:

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

We consider subject progression to be integral to the teaching and learning of computing across the whole school, and we ensure that children are given the opportunity to build upon prior knowledge. This is ensured through the ELT Scheme of Work. This ensures a sequence of lessons where knowledge and skills are practised, acquired and progressively built upon through weekly computing lessons. Key vocabulary within the subject is displayed in the Computing Suite and this is consistently referred to during lessons.

Children's work is saved in their own personal area on the school's secure network and this is monitored via teacher access to the Children's folders (Q: Drive)

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Assessment and Recording
At Oakdene Primary Academy, assessment is an integral part of the teaching process. Children are taught from an early stage to save work in personal student folders, to which only they have access through personal logins. The assessment of children's progress and work is on-going on a lesson-by-lesson basis, so as to ensure that understanding is achieved and that progress is being made. Verbal feedback is given to the children as they are working. Progress is assessed on an ongoing basis against statements within the ELT Scheme. Assessments are recorded formally on a half-termly basis using a RAG grid.

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

Online Safety
Due to the increasing importance and ever-changing nature of online safety, a separate online safety policy has been created, detailing filtering and monitoring procedures along with other information about how we support staff, pupils and parents to stay safe online. Using the ELT Scheme of Work, our school provides a progressive computing curriculum, which also teaches children about saying safe online and this is also supported through an Online Safety element to each Computing topic. Opportunities for learning about online safety are frequent and part of the scheme and are reinforced whenever technology is used. Clear rules for online safety are set out in the form of an Acceptable Usage Agreement which parents and pupils sign when a pupil first starts at the school. The school's online presence is monitored through Securely which monitors all school's online devices. This has a robust Red List of inappropriate terms and monitors anything that could potentially be a safeguarding risk to staff and pupils. Securely reacts immediately to risks, by showing a holding screen (Stating: This content has been blocked because it does not comply with the acceptable usage policy.) or only appropriate terms and images during Search Engine searches. It will send immediate concerns and monitoring reports to the Designated Safeguarding Lead. This will identify the account used to initiate the concerning search, or identify that an iPad has been used and this can be cross-referenced with the iPad timetable to identify the particular class using the iPads. Online safety rules are also displayed in the computer suite and referred to frequently by teachers for pupils to refer to if needed.

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Equal Opportunities
All pupils, regardless of race or gender shall have the opportunity to develop skills using computers and other related technologies. 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 SEN 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.

Roles and Responsibilities
The Principal will:
• Actively support and encourage staff, praising good practice and supporting staff development, in-service training (particularly for the Computing Lead) and acquiring resources
The Computing Lead will:
• Advise and support staff in planning, teaching and learning of computing;
• Develop an action plan for computing with realistic and developmental targets;
• With the support of the School's technician, audit, identify, facilitate purchase and organise all computing resources, ensuring they are readily available and well maintained;
• Document and review the agreed ways of working through a written policy document and knowledge and skills progression
• Keep up to date on new developments in the use of computing in the curriculum and inform staff
• Promote computing throughout the school.

The Class Teacher will:
• Be responsible for the planning and teaching of computing as set out in this policy and scheme;
• Follow the subject's long-term plan and follow termly Year Group medium-term plans;
• Embed the computing knowledge and skills progression document within planning and 'quality first' teaching;

Resources
The school has a range of resources to support the delivery of the Computing curriculum, the Early Years Framework and learning across all areas of the National Curriculum. Each class from Reception to Year 6 have access to some shared computers within or just outside of their classroom which the pupils can access. There are shared iPads timetabled across all Year Groups.

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The EYFS also have access to iPads which can be used in school along with other technological toys and equipment, for example, Bee-Bots. Teachers are mindful when setting tasks online and consider that not all pupils may have access to a device at home when they are planning. In addition, we ask that staff and parents inform and inspire pupils through their use of technology. The computing action plan feeds into the schools' priorities for equipment and future expenditure. Any expenditure is reviewed by the Principal to look at the impact the purchase will have on pupils' learning.

School Website and Social Media
Our school website is located at www.oakdeneprimary.org.uk. The school uses MarvellousMe to share what is happening in school and for the purposes of self-publicity, as well as keeping parents informed. Staff are asked to message regularly to share events and successes within each class, and this is used as an additional information provider for the parents.

Copyright and Licensing
All software used will be in strict accordance with the licence agreement. OneIT support the school with technical issues as well as ensuring that software on the computers is up to date and in accordance to licences. Personal software should not be loaded onto school computers.

Rights Respecting Education

Article 13: (freedom of expression) Every child must be free to express their thoughts and opinions and to access all kinds of information, as long as it is within the law.

Article 17: (access to information from the media) Every child has the right to reliable information from a variety of sources. Governments must help protect children from materials that could harm them.

Article 28: (right to education) Every child has the right to an education.

Article 29: (goals of education) Education must develop every child's personality, talents and abilities to the full.