



# THE HERMITAGE and THE OAKTREE SCHOOLS

*Inspire, Learn, Achieve*

## Computing Policy

Person Responsible	Computing Subject Leaders
Date Adopted	Summer Term 2023
Date of last review	Summer Term 2023
Date of next review	Summer Term 2026

At The Hermitage and The Oaktree, we believe that every child should have the right to a curriculum that champions excellence, supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays, not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school. We believe that technology can provide: enhanced collaborative learning opportunities; better engagement of pupils; easier access to rich content; support conceptual understanding of new concepts and can support the needs of all our pupils. This policy sets out our aims and strategies for the successful delivery of Computing.

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, collaborate, express ideas and create digital content. We recognise that pupils are entitled to a broad and balanced Computing curriculum with a structured and 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 creative, digitally literate, computational thinkers who can 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.

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 communication technology.

The Hermitage and Oaktree Schools' aims to:

- Provide an exciting, rich, relevant and challenging Computing curriculum for all pupils.
- Enthuse and equip children with the capability to use technology throughout their lives.
- Grow an awareness of how technology is used in the world around us and the benefits that it provides.
- Give children access to a variety of hardware, software and unplugged resources.
- Instil critical thinking, reflective learning and a 'can do' attitude for all our pupils, particularly when engaging with technology and its associated resources.
- Teach pupils to become responsible, respectful and competent users of data, information and communication technology.
- Teach pupils to understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- Equip pupils with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others.
- Use technology imaginatively and creatively to inspire and engage all pupils, as well as using it to be more efficient in the tasks associated with running an effective school.
- Provide technology solutions for forging better home and school links.
- Utilise computational thinking beyond the Computing curriculum.

### **Curriculum**

At The Oaktree School, 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. We follow the NCCE's Teach Computing scheme for work using their cyclical pedagogy to ensure our pupils know more, remember more and are able to do more with their computing knowledge and skills.

The Hermitage School follows the Purple Mash Computing Scheme of Work from Year 3 to Year 6 and in The Orchard Centre. The scheme of work supports our teachers in delivering fun and engaging lessons, which help to raise standards and allow all pupils to achieve to their full potential. The scheme of work provides the opportunities for children to thrive while enabling us to fulfil the national vision for Computing. It provides immense flexibility, strong cross-curricular links and gives excellent supporting material for teachers.

### **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 and computers weekly. Pupils in the Foundation Stage will have experiences using a range 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.

### **Key Stage 1**

During Key Stage 1, pupils 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. 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 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. Pupils will 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. 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 build 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 how accurate and authentic the information is that they find online. Pupils will extend their knowledge of computer science skills by using their knowledge and understanding 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 pupils 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.

### **Curriculum content**

At The Oaktree School, 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

The curriculum is implemented through the use of the NCCE's Teach Computing scheme of work. A subject progression document is integral to the teaching and learning of computing across the whole school and ensures that children are given the opportunity to build upon prior knowledge. Long term plans and medium-term plans provide an appropriate balance and distribution of work throughout the year. By following the progression document alongside the Teach Computing scheme of work, it ensures a sequence of lessons where knowledge and skills are practised, acquired and progressively built upon. Key vocabulary is displayed within the Computer Suite and this is consistently referred to during lessons.

The Hermitage School follows the Purple Mash scheme of work and modules are planned in line with the National Curriculum. Medium term plans are designed to enable pupils to achieve stated objectives, allowing for clear progression as they move up the school. Pupil progress towards these objectives is recorded by teachers as part of their class recording system.

## **Resources**

### **The Oaktree School**

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. Pupils have access to shared computers and iPads, along with other technological toys and equipment, for example, Bee-Bots.

### **The Hermitage School**

Pupils have access to shared devices, namely laptops and iPads. Each child has an account for Purple Mash and Seesaw to support the delivery of the Computing curriculum and build an online portfolio of work.

## **Assessment and Recording**

Key objectives to be assessed are taken from the National Curriculum. Teachers regularly assess children's understanding and skills through observations, discussions with pupils and looking at completed work. Regular assessment of Computing work is an integral part of teaching and learning and central to good practice. Feedback is given to the children as soon as possible and guided by the Marking and Feedback Policy. At the end of a unit of work, teachers make a judgement against the school's progression of skills, which is aligned with the National Curriculum levels of attainment. Teachers then use the levels that they record to plan the future work of each child and to make an annual assessment of progress for each child, as part of the annual report to parents.

## **Monitoring**

The monitoring of the standards of children's work and of the quality of teaching in Computing is the responsibility of the Computing subject leaders. The work of the subject leader also involves supporting their colleagues in the teaching of Computing, being informed about current developments in the subject, and providing strategic lead and direction for the subject in their school. The impact of the computing curriculum is monitored regularly by the subject leader 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.

At The Hermitage, all teachers are expected to keep an online portfolio or track children's work using Purple Mash and/or Seesaw. This portfolio must contain work samples from all areas of the curriculum taught for the year group.

### **Online Safety**

Due to the increasing importance and ever-changing nature of online safety, a separate online safety policy has been published, detailing filtering and monitoring procedures along with other information about how we support staff, pupils and parents to stay safe online. Both the Teach Computing and Purple Mash schemes of work provides a progressive curriculum, which also teaches children about staying safe online. This is also supported and reinforced throughout our weekly Life Skills lessons and at regular assemblies. 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 Oaktree School. All staff and visitors in both schools are required to read and follow the Acceptable use of ICT agreement.

### **Equal Opportunities**

All pupils regardless of race, gender, cultural diversity or disability 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 technology. The class teacher will adapt 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.

### **Roles and Responsibilities**

All governors are interested in the development of computing to promote high quality teaching and learning in the school. A governor is nominated to be responsible for monitoring and evaluating the impact and value of computing on children's learning. They liaise with the subject leader and report back to the governing body with their findings annually.

The subject leader will:

- Be responsible for providing professional leadership and management of computing within the school
- Raise the profile of Computing for all stakeholders
- Monitor standards to ensure high quality teaching, effective use of resources and improved standards of learning and achievement. This will include observation of lessons and scrutiny of the pupils' work.
- Ensure assessment systems are in place
- Collect, analyse and distribute, where applicable, information relating to the subject to the relevant people.

The class teacher will:

- Be responsible for the delivery of the scheme of work as set out in this policy
- Use key performance indicators to inform teaching and learning as well as assess children's understanding
- Embed the computing knowledge and skills progression document within planning and quality first teaching

It is the responsibility of all staff to make themselves aware of legislation relating to the use of ICT and computing, including copyright and data protection issues (see acceptable use policy and online safety policy).

### **Parental involvement**

Parents are encouraged to support the implementation of computing where possible by encouraging use of computing skills at home and engaging with their child's portfolio of work on Seesaw. They are made aware of e-safety and are encouraged to promote this at home.