Computing Handbook



Shoreditch Park
Primary School

Shoreditch Park Primary Computing Handbook

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Computing Intent

At Shoreditch Park Primary School, the computing curriculum follows the National Curriculum for Key Stages 1 and 2 and Development Matters in the Early Years Foundation Stage (Technology). The computing curriculum is taught in a logical sequence where pupils' knowledge, skills and vocabulary are built upon year on year, ensuring progression from Nursery, towards EYFS, KS1 and KS2 end points.

Pupils from all year groups build upon their knowledge and skills in different areas of computing, including programming, storing, retrieving and sending information, evaluating digital content, and using technology in a way that is safe and respectful of others. Prior learning is revisited to ensure pupils' understanding is retained and becomes embedded in pupils' long-term memory.

The computing curriculum allows pupils to gain key knowledge and skills in the three main areas of the computing curriculum: **computer science** (programming and understanding how digital systems work), **information technology** (using computer systems to store, retrieve and send information) and **digital literacy** (evaluating digital content and using technology safely and respectfully).

The computing curriculum prepares learners for their future by giving them opportunities to gain knowledge and develop skills that will equip them for an ever changing digital world. This is reflected in the way we teach computing, in discrete lessons, and also purposefully woven into all other curriculum areas, particularly mathematics, science, design and technology and English. Resources are adapted, when necessary, to ensure SEND and disadvantaged pupils can access all aspects of the same curriculum.

At Shoreditch Park Primary School we use the Switched On Computing (Boost Learning) and Lego WeDo schemes to teach computing - placing a strong emphasis on problem solving (debugging) and manipulating systems. Within our computing lessons we learn about digital literacy (E-Safety), information technology and computer science. At Shoreditch Park we believe that computational thinking is vital in enabling children to understand the world around them and to ensure that all children are able to access a society which is ever increasingly becoming technology dependent. Computational thinking allows children to solve problems, design and control technologies and to work at their creative best whilst also allowing children the opportunity to apply their knowledge of maths and literacy. Pupils who are able to think computationally are more able to conceptualise, understand and use computer based technologies – better preparing them but their future.

Each half term a different year group learns computing through Lego Wedo, an engaging and challenging curriculum which teaches the following key learning values:

- Investigating, modelling and designing solutions
- Engage pupils in science by making it real and relevant
- Basic computing skills
- Collaboration and presentation skills
- Critical thinking and problem-solving

Find out more about the **Lego WeDo** curriculum and **Switched on Computing from Boost Learning.**

Our Vision

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

Information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Shoreditch Park Primary School, we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively.

Curriculum Overview

Computing at Shoreditch Park is taught using a blend of Switched on Computing and Lego Wedo to ensure that all children are making good progress against the National Curriculum outlined prior. By using these two, all children are given the opportunity to apply their learning in a range of ways, manipulating physical and digital systems from Year 1 onwards.

Computing from Year 1 to Year 6 will be taught using the Switched on Computing (Boost Learning) scheme of work. Switched on Computing covers all aspects of computing outlined in the National Curriculum: Digital literacy, ICT, Computer Science and E-safety. Alongside discreet computing lessons, ICT is taught in a cross curricular manner whenever children are using technology in other lessons. Skills such as word processing, research using iPads and the use of green screens are all valuable lessons preparing children for life.

To access the switched on computing curriculum for your year group, log onto Boost Learning from Hodder Education. Your username is your email address and your password will be your personal

chosen password. The site is very easy to use. Simply log in, search 'Switched on Computing' and select your year group. From here you can navigate to particular modules. There are also guidance videos to develop subject knowledge for each unit.

E – Safety

Please also see E-Safety Policy.

At Shoreditch Park we believe that ICT is central to all aspects of learning; for adults and children in both the school and the wider community. Provision should reflect the rapid developments in technology.

ICT in the 21st Century is an essential resource to support learning and teaching, as well as playing an important role in the everyday lives of children, young people and adults. Consequently, we need to build in the use of these technologies in order to equip our young people with the skills to access lifelong learning and employment. All children, whatever their needs, will have access to a range of up to date technologies in both the suite and classrooms. ICT is a life skill and should not be taught in isolation.

Information and Communications Technology covers a wide range of resources including; web-based and mobile learning. It is also important to recognise the constant and fast paced evolution of ICT within our society as a whole. Currently the internet technologies children are using both inside and outside of the classroom include:

- Websites
- Learning Platforms and Virtual Learning Environments
- Email and Instant Messaging
- Chat Rooms and Social Networking
- Blogs
- Podcasting
- Video Broadcasting
- Music Downloading
- Gaming
- Mobile/ Smart phones with text, video and/ or web functionality
- Other mobile devices with web functionality

All users need to be aware of the range of risks associated with the use of these Internet technologies.

At Shoreditch Primary School, we understand the responsibility to educate our pupils on e-safety issues; teaching them the appropriate behaviours and critical thinking skills to enable them to remain both safe and legal when using the internet and related technologies, in and beyond the context of the classroom. We find that the 'blocking and banning' approach which merely limits exposure to risk, is not a sustainable approach. We focus on a model of empowerment; equipping children with the skills and knowledge they need to use technology safely and responsibly, and managing the risks.

Whole school approach

All members of the school community have a responsibility for promoting and supporting safe behaviours in their classrooms and follow school e-safety procedures.

Evidence for Computing

At Shoreditch Park Primary School, all student work is saved on Google Classroom under 'Whole School Computing' (for all year groups). It is the class teacher's responsibility to ensure that their file is clearly organized, with clear titles of which lesson the evidence is for.

When assessing computing, it's important to look for evidence of knowledge and understanding as well as technical skills. Asking pupils to talk about what they have learned as well as showing the work they have completed, will provide important evidence of their learning. Staff are encouraged to record videos or screencasts of pupils as they discuss their work, explaining what they have done and, more importantly, how they've done it. Their observation of pupils as they work on tasks, their contribution to class discussions and individual conversations with pupils as they work provides further evidence of progression.