



## **Computing Policy** **Southwold Primary and Nursery School**

### **COMPUTING STATEMENT OF INTENT**

At Southwold Primary and Nursery School, we are passionate that our children will leave us as effective and reflective digital learners. Our aim is that each child will develop the skills and confidence to access technology as a tool for learning and contribute positively to the ever-changing digital world.

Every child is exposed to a high-quality teaching that meets the requirements of the NC and provides a relevant, challenging, and enjoyable computing curriculum with a range of learning experiences for all. *Our Golden Threads; values, knowledge and skills, inclusion and diversity, active lifelong learners, rich vocabulary, and community cohesion*, are instrumental in everything we do at Southwold and are embedded across our Computing curriculum. Being an inclusive school, we encourage all children to develop their own curiosity and to challenge themselves in their learning.

We want our children to be safe, responsible, and good digital citizens in society, so these skills are woven into our daily lives at Southwold, becoming habitual. Through computing, children will learn to be problem solvers as well as creative critical and computational thinkers. These skills can then be communicated and transferred into all aspects of their life.

### **Intended outcomes**

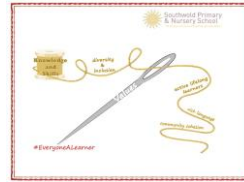
Whilst there is no longer a 'Technology Early Learning Goal', it is important in EYFS, to give children a broad, play-based experience of Computing in a range of contexts, including outdoor play. Computing is not just about computers. The early years learning environments feature Computing scenarios based on experience in the real world, such as role play. Children gain confidence, control, and language skills through opportunities to explore using non - computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices such as sound clipboards support children to develop their communication skills. This is particularly useful with children who have English as an additional language.

### **By the end of EYFS, pupils will:**

- Recognise that a range of technology is used in places such as homes and schools.
- Select and use technology for a particular purpose.
- Operate and complete a range of simple programmes with an understanding of what they can achieve.

### **The National Curriculum aims to ensure that all children:**

- Can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication.
- 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.



## **IMPLEMENTATION OF COMPUTING**

### **Teaching & Learning style**

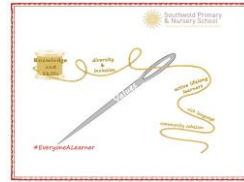
At Southwold, we follow the Computing National Curriculum aims through our own broad, balanced, and progressive curriculum which reflects our termly enquiry-based question where possible. This curriculum is planned for and delivered using the six principles of learning providing rich opportunities for challenge, explanation, modelling, practice, questioning and feedback. Each session is adapted to suit the needs of our children so that they are engaged, challenged, and continually building on their previous understanding. Computing is taught in explicit lessons, tinkering lessons, and is used in as many cross curricular ways as we can, where it will enhance the teaching of our termly ‘big question.’ Our teaching and learning of Computing is ambitious so we always have high expectations for all our pupils. We encourage students to be resilient, question, have time to practice a skill and we support them in responding to modelling, feedback, and critique so they can improve their work and learning behaviours. We like them to be inspired by the excellent work of others and use challenge as a key driver in everything we do.

### **EYFS**

The EYFS is the bed rock of all subjects. Whilst there is no Technology Early Learning Goal, we recognise that children require access to a range of technologies, both digital and non-digital in their early lives. Exploring with different technologies through play provides opportunities to develop skills that children will go onto develop in their lifetimes. Investigations, scientific enquiry, and exploration are essential components of learning about and with technology both digitally and in the natural world. Through technology children have additional opportunities to learn across all areas in both formal and informal ways. Technologies should be seen as tools to learn both from and with, to integrate technology effectively within early years practice. In EYFS, there is no discrete content which relates to Computing. However, in readiness for KS1, pupils are exposed to a range of technology that develop key skills, knowledge, and confidence. This technology is incorporated into the continuous provision in the EYFS environment e.g., use technology in role play scenarios and we use these opportunities to teach them how to stay safe when using technology especially when online. The pupils have access to a variety of equipment when carrying out their learning challenges. Computers are available to develop mouse and keyboard skills; floor robots prepare pupils for the KS1 coding curriculum, digital cameras and audio recording devices enable pupils to create digital content. The EYFS curriculum gives children the necessary skills and knowledge to succeed in computing when they enter Year 1 and beyond.

From EYFS through to Y6, we cover the three key strands in Computing: **Computer Science**, **Information Technology** & **Digital Literacy**. Along with eight Online Safety topics, based on ‘Education for a Connected World’ - Project Evolve framework.

<b>Information Technology</b>	<b>Computer Science</b>	<b>Digital Literacy</b>
Some are taught discretely, and the rest is taught creatively within our cross curricular approach. These should be closely linked to Digital Literacy to ensure suitability for safety & audience	Computational Thinking is solving problems with or without a computer; ‘sequence’ then how can it be solved; ‘technical skills.’ Programming-write algorithms and implement as code then debug. They evaluate & find best/most appropriate way to reach goal.	Developing effective strategies to navigate staying safe online by being aware of theirs & other’s behaviours, their influences & consequences.



<p><b>Multimedia:</b></p> <ul style="list-style-type: none"> <li>• Word Processing/Typing <ul style="list-style-type: none"> <li>• Sound</li> </ul> </li> <li>• Presentations, Creating eBooks, and Web Design</li> <li>• Photography and Digital Art <ul style="list-style-type: none"> <li>• Creating Video</li> </ul> </li> <li>• Augmented Reality and Virtual Reality <ul style="list-style-type: none"> <li>• Animation</li> <li>• Data Handling</li> </ul> </li> </ul>	<p><b>Computational Thinking/ Unplugged Coding/Programming Computing Systems Computer Networks (KS2)</b></p>	<p><b>Self-Image and Identity Online Relationships Online Reputation Online Bullying Managing Online Information Health, Wellbeing and Lifestyle Privacy and Security Copyright and Ownership</b></p>
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**Information Technology** is used to support learning in a range of cross curricular ways, to enhance child’s learning experience throughout their time with us. In Key Stage 1 and 2, the children can learn and develop the skills and techniques that allow them to present their work creatively in a variety of ways. They also learn how to store and organise files so they can be found easily. Our school uses ‘Purple Mash’ to produce a variety of work and provide access to the platform at school and home. Follow this link to see examples of what our children have been creating:

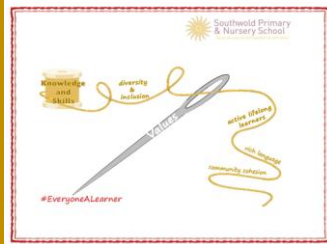
<https://www.purplemash.com/displayboard/59ce3d0eec511a11068b4567>

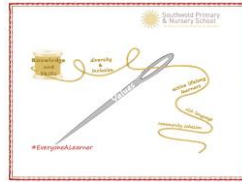
**Computer Science**, the children use Computational Thinking to solve problems effectively with or without a computer. They think of a sequence of steps (algorithm), needed to solve a problem. Then they use their technical skills by coding a program on the computer. So, when programming, the children develop knowledge of digital systems by writing an algorithm and implementing these as code. The children are taught to be detectives by finding mistakes in a program and fixing/ debugging them to make them work more effectively. In KS2 they build up knowledge about computer networks so that they understand how the internet works and how searches are performed.

**Digital Literacy** is taught regularly to ensure our children are good digital citizens and is part of our everyday lives at Southwold. The safety of our children is paramount; therefore, online safety is taught regularly and is part of our everyday lives at Southwold. The children are taught about online technology, its impact on behaviour and development, as well as what skills they need to navigate it safely. We constantly use SMART Rules and our school values, including the 4Rs (Respect, Responsibility, Reasoning & Resilience) and are encouraged to speak to an adult if they feel uneasy at any time while using the Internet. We provide multiple reporting routes like the CEOP reporting tool via our website, as well as Childline, for our older children. Staff have regular updates, training and take part in Safer Internet Day activities with the children. We communicate regularly with parents through our weekly ‘Diginews’ and offer online safety support in school to help parents, carers, and the wider community.



**Golden Threads**

Values (Behaving the same online and offline)	 <p>Our Golden Threads are embedded in Computing by;</p>	
	<b>Knowledge &amp; Understanding</b>	<p>Children are exposed to a broad, balanced, and progressive Computing curriculum which is planned for and delivered using the six principles of learning providing rich opportunities for challenge, explanation, modelling, practice, questioning and feedback. Skills are revisited to deepen their understanding.</p> <p>In Computing Science, we use logical thinking, abstraction, pattern, algorithms and decomposition concepts and a variety of approaches such as tinkering, creating, collaboration and persevering to create computational thinkers who can problem solve and work well as a team.</p>
	<b>Diversity &amp; Inclusion</b>	<p>During lessons, everyone has a voice, and expects their contributions to be equally valued. We ensure that different perspectives are heard and valued in class discussion through a range of strategies to identify misconceptions and to gain feedback from all pupils.</p> <p>We use a variety of teaching materials such as videos, text, and audio to support all learners, especially those with sensory disabilities.</p> <p>We choose layouts, colours and fonts which are accessible and make sure the amount of new information presented is appropriate.</p>



		<p>In Computer Science sessions, we use; Task, Design, Code, Running code; to support less confident coders and children who need more processing time to unpick a code to debug it. When appropriate, we use unplugged computing activities to introduce a programming concept can help make sense of abstract concepts through physical representations.</p> <p>We use scaffolding to support learners so they can learn about the key concepts and features without having to worry about making mistakes or writing a large amount of text which improves their success and confidence.</p> <p>Familiar stories and real-life situations are often used as starting points for activities to make links, support understanding, see how this knowledge can be applied to everyday life and reduce the amount of new information being introduced at one time.</p> <p>We have Code Club and Computing PLT to enrich children's experience of computing.</p> <p>If any child does not have access to the internet at home, any online homework can be completed during a lunchtime.</p> <p>To ensure there are opportunities made to counter any stereotypes, we celebrate for example, positive contributions that females have made to the computing industry.</p> <p>When appropriate, technology is also used to facilitate the inclusion of pupils learning English as an additional language.</p>
	<b>Active lifelong learners</b>	During computing activities, we provide a range of investigations, key questions, and scenarios to motivate and encourage active learning throughout, relating them to everyday situations.
	<b>Rich language</b>	We embed key vocabulary throughout lessons using verbal repetition, actions, and sentence stems.
	<b>Community cohesion</b>	Visitors near and far are invited to speak to parents and pupils about topics related to our curriculum and we take part in national online safety assemblies, competitions, events, and clubs to broaden our horizon about relevant topics.

### See documents to support this:

Online Safety Curriculum skills and vocabulary progression map  
 Computing Curriculum skills and vocabulary progression map  
 Computing 'Everyone A Learner'  
 Long Term Computing Overview  
 Medium Term Computing Plans  
 Short Term Computing Plans  
 Floor Books and Digital Learning Journals  
 6 principals of Teaching & Learning  
 Online Safety Team Minutes  
 Policies linked e.g., Online Safety & Safeguarding, Behaviour, Anti-bullying, AUA, Password, ICT Misuse, Remote Learning AU.

### Resources

Our 'Enchanted Forest' has a set of 8 computers, a laptop trolley containing 15 laptops and an iPad trolley containing 15ipads. These are timetabled for use by all classes. Any free slots are available for use as part of extra computing sessions or use of technology in a cross-curricular way. In this area, we keep other resources for IT and computing, including software, in the 'Enchanted Forest' such Green Screen, BeeBots, ProBots, microscope.

Computers around the school are networked and have Internet access.  
 Each teacher has access to a laptop in their classroom, an interactive whiteboard, and an iPad.



EYFS staff have separate iPads to record child's progress on Tapestry. EYFS pupils have a selection of resources such as sound clipboards, sound recording buttons, lightbox which are used regularly. Our WHF IT Team supports and advises the school with maintenance of technology, technical hardware, software, security, and filtering.

### **Online resources for home use**

To ensure that our children have access to online educational opportunities inside and outside of school, we have bought or set up free access to:

- Microsoft Teams
- Purple Mash
- My Maths
- Ten Town
- Times Tables Rockstars
- Oxford Owl
- Explorify (free)
- Tapestry (EYFS Staff & parents)

Children have passwords that can be used to access these sites. They have been shown how to use them and how to keep their passwords safe from others.

### **Contribution of Computing to teaching in other curriculum areas**

Computing is used to enhance learning across all areas of the curriculum. We use technology, logic, creativity, and computational thinking to solve problems that span across all topics. It is the systematic breakdown (decomposition) of both the problem and the solution e.g., how to make a sandwich by using precise instructions and 'debug' it if the process is not working effectively. Technology is used to improve other topics e.g., create a mini scenario to demonstrate a topic vocabulary through 'Green Screen', using Pic Collage app to show the learning at the end of a topic or PowerPoint to show the process of how a volcano erupts.

### **Personal, social and health education (PSHE) and citizenship**

Computing contributes to the teaching of PSHE and citizenship as children learn to work together in a collaborative manner during these sessions. They also develop a sense of global citizenship by using the Internet, class blogs and email. Learning to use the internet efficiently and safely is a crucial component which we highlight in class and give children the skills to use in their everyday lives. We develop a set of safe and discriminating behaviours for pupils to adopt when using the Internet and other technologies. Through discussion of safety and other issues related to digital communication, the children develop their own view about the use and misuse of Computing, and they also gain an insight into the interdependence of computing users around the world.

### **Spiritual, moral, social and cultural development**

During Computing, we promote spiritual development through discussions about the wonder and power of the digital age e.g., use of the internet, understand the advantages and limitations of ICT and use the internet as a gateway to big life issues. In lessons, we explore the moral issues



surrounding the use of data and consider the benefits and potential dangers of the internet e.g., campaigns for charities and injustice as a force for good, cyber bullying as a danger and we consider the vision and moral purpose of those involved in developing the web. We promote social development when exploring digital media services with other schools and communities, highlighting ways to stay safe when using online services and social media, being prepared to work with technology to forge new relationships and discuss the impact of ICT as a way for people to communicate. We promote cultural development through exploring human achievements and creativity in relation to worldwide communications and developing a sense of awe and wonder at human ingenuity.

### **Teaching children with special educational needs**

At our school we teach Computing to all children, whatever their ability. Computing forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our Computing teaching, we provide learning opportunities that enable all children to make progress. We do this by setting suitable learning challenges and responding to each different need. Assessment against the National Curriculum allows us to consider each child's attainment and progress.

When progress falls significantly outside the expected range with a range of subjects/ specific areas, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, child's teaching materials, teaching style, differentiation – so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs.

Interventions are planned when a teacher has assessed that a child has a particular need. As we adopt a fully inclusive approach to teaching, we enable children to have access to the full range of activities involved in learning Computing.

Teachers provide help with communication and English through:

- using texts that children can read and understand.
- using visual and written materials in different formats.
- using ICT, other technological aids, and materials (e.g., talking tins).
- using alternative communication, such as signs and symbols.
- using scaffolding.
- using Google translate.

### **IMPACT OF COMPUTING**

By the end of KS2, Southwold children will be able to:

- understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication.
- analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems.
- evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.



- be responsible, competent, confident, and creative users of information and communication technology.

### **Assessing and Recording**

Teachers use a variety of formative assessment to feed into our future planning to support/ challenge each child:

- Thought showers at the beginning of a topic to inform future lessons, ensuring children are supported and challenged appropriately and at the end of each topic to demonstrate progression.
- Verbal quick fire quizzes
- Rough written Entry/ Exit tickets,
- Hinge Qs, observations, pupil conferencing and verbal feedback.
- Partner PowerPoint vocabulary flashcards
- Feedback on Purple Mash
- Self-assessment: thumbs up/ thumbs across
- Every class has their own Online Safety working wall to aid the teaching and learning of these topics. This is a place that children can refer to key vocabulary, processes, and examples of work, to support and challenge them.

Teachers use summative assessment:

- Floor book/ concept cartoons: At the end of each topic, teachers select one or two samples of work to put in our 'Floor book.' Younger children are supported by drawing pictures and labelling or discussing their learning. These show progress between year groups and each strand.
- Assessment Grids: Each year group completes assessments grids every other term, to measure progress against the key objectives. This information is then used by the teachers when they revisit that same strand again and future teacher use this information so that they can plan and adapt the following year's work.
- End of year Report: A child's end of year written report sent to parents, highlight's their children's computing ability and provides direction for their future development.

### **Monitoring and review**

The Computing Lead is responsible for monitoring the quality and standards of teaching in Computing and the children's Computing work. We use our action plan to inform our key priorities in these areas.

This also involves supporting colleagues in the teaching of Computing, informing them about current developments in the subject, and providing a strategic lead and direction for the subject in the school. We use pupil, staff and parent surveys to inform policy and procedures alongside any future training, lessons and parent engagement.

We monitor measure the impact of our online safety and computing curriculum every other term through:

- Review of our training and monitoring schedule





- Learning walks
- Scrutiny of Floor Book and Digital Portfolios (in our school and across the WHF)
- Pupil Voice- mini focused groups
- Teacher voice- questionnaire
- Parent voice- questionnaires used at appropriate times
- Online Safety: 360 Review tool, Online Safety Team Meetings 3 times a year (Received the 360Review award 2021)
- Annual summary report in which the Computing Lead evaluates the strengths and weaknesses in the subject, indicating areas for further improvement.

Monitoring allows us to regularly review and improve our practise as a balanced professional debate about evidence taken from the logs and the impact of preventative work. This is part of our continuous cycle so that training, knowledge, and understanding is up to date at all times. We are proactive rather than reactive. The evidence of impact is shared with other schools in the WHF, local schools and agencies to ensure the development of a consistent and effective online safety

Signed: Mrs Palser  
Date: October 2022  
Review date: October 2023