



Computing Subject Overview

In order to achieve our whole school intent, we have identified 3 Golden Threads that weave through our curriculum and underpin everything we do. This means that in delivering our curriculum we are embedding our school **Christian Values**, developing **knowledge and skills** progressively over time with an ambitious and aspiring curriculum whilst immersing our children in **language rich** teaching.



Intent

At Forest and Sandridge, we aim to prepare our learners for their future by giving them the opportunities to gain knowledge and develop skills that will equip them for an ever changing digital world. Knowledge and understanding of Computing is of increasing importance for children's future both at home and for employment. Our Computing curriculum focuses on a progression of skills in digital literacy, computer science, information technology and online safety to ensure that children become competent in safely using, as well as understanding, technology. These strands are revisited repeatedly through a range of themes during children's time in school to ensure that do more, know more and remember more. Our intention is that Computing also supports children's creativity and cross curricular learning to engage children and enrich their experiences in school.

Implementation

Our whole curriculum is shaped by our school vision which aims to enable all children, regardless of background, ability, additional needs, to flourish and become the very best version of themselves they can possibly be. We teach the National Curriculum, supported by a clear skills and knowledge progression within Teach Computing. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children, as we acknowledge that if children do more, they know more and as a result will remember more.

To ensure a broad range of skills and understanding, Computing is taught across three main strands: digital literacy, computer science and information technology. As part of information technology, children learn to use and express themselves and develop their ideas through ICT for example writing and presenting as well as exploring art and design using multimedia. Within digital literacy, children develop practical skills in the safe use of ICT and the ability to apply these skills to solving relevant, worthwhile problems for example understanding safe use of the internet, networks and email. In computer science we teach children to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. Also to analyse problems to computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. We also teach a progression of Computing vocabulary to support children in their understanding.

At Forest and Sandridge, we give children access to a wide range of good quality resources, such as iPads, laptops, crumble kits and cameras, and provide cross curricular opportunities for children to apply their Computing knowledge and skills. Teachers carefully plan new vocabulary to teach, and display in the classroom in order for children to access independently. We support children to use the language of sequencing using sentence stems.

Online Safety is taught regularly in a planned and sequenced way, building layers of resilience against inappropriate conduct, content and contact. Lessons are taught on a weekly basis to ensure Online Safety messages are consistently drip fed and that skills are embedded long term.

Planning



Computing and Online Safety – Whole school overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
EYFS For further information please see UOW EYFS Document.	Technology around us	Using a simple programme (purple mash)	Programming- Beebots	Digital art	Animation (chatterpix)	Photography
Year 1	Computing systems and networks – Technology around us	Creating media – Digital painting	Programming A – Moving a robot	Data and information – Grouping data	Creating media – Digital writing	Programming B – Introduction to animation
Year 2	Computing systems and networks – IT around us	Creating media – Digital photography	Programming A – Robot algorithms	Data and information – Pictograms	Creating media – Making music	Programming B – An introduction to quizzes
Year 3	Computing systems and networks – Connecting computers	Creating media – Animation	Programming A – Sequence in music	Data and information – Branching databases	Creating media – Desktop publishing	Programming B – Events and actions
Year 4	Computing systems and networks – The Internet	Creating media – Audio editing	Programming A – Repetition in shapes	Data and information – Data logging	Creating media – Photo editing	Programming B – Repetition in games
Year 5	Computing systems and networks – Sharing information	Creating media – Video editing	Programming A – Selection in physical computing	Data and information – Flat-file databases	Creating media – Vector drawing	Programming B – Selection in quizzes

Year 6	Computing systems and networks – Communication	Data and information – Spreadsheets	Creating media – 3D Modelling			Programming A – Variables in games
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
EYFS	Self-Image and Identity Privacy and security	Online Bullying	Online Reputation	Health, well-being and lifestyle	Online Relationships	Managing Online Information Copyright and ownership
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Year 2	Self-Image and Identity Privacy and security	Online Bullying	Online Reputation	Health, well-being and lifestyle	Online Relationships	Managing Online Information Copyright and ownership
Year 3	Self-Image and Identity Privacy and security	Online Bullying	Online Reputation	Health, well-being and lifestyle	Online Relationships	Managing Online Information Copyright and ownership
Year 4	Self-Image and Identity Privacy and security	Online Bullying	Online Reputation	Health, well-being and lifestyle	Online Relationships	Managing Online Information Copyright and ownership
Year 5	Self-Image and Identity Privacy and security	Online Bullying	Online Reputation	Health, well-being and lifestyle	Online Relationships	Managing Online Information Copyright and ownership

“For I know the plans I have for you,” says the Lord... “Plans to give you hope and a future” Jeremiah 29:11

Nurture, Grow, Flourish.

Impact- How do our Golden Threads work within this subject?

The implementation of this curriculum ensures that when children leave Forest and Sandridge school, they are competent and safe users of ICT with an understanding of how technology works. They will have developed skills to express themselves and be creative in using digital media and be equipped to apply their skills in Computing to different challenges going forward.

Christian Values

- Developing **Courage**, by expecting children to solve problems and create high quality content.
- Developing **Respect**, by guiding children on how to handle equipment, information and respect each other online.
- Developing **Honesty**, by supporting children to evaluate and improve their own work.
- Developing **Humility**, by offering the opportunity for children to evaluate their work and make improvements.

Knowledge and Skills

- Developing new knowledge by using new hardware and software to complete a goal.
- Building on knowledge by revisiting and enhancing skills as children progress through the school.
- Developing skills by looking at a range of multimedia so that children obtain a breadth of knowledge of different applications.
- Children having a greater understanding and appreciation for online safety and how to conduct themselves online.
- Children developing problem solving skills through de-bugging which they can apply to other areas of the curriculum.

Language Rich

- Highlighting key words for each strand of the curriculum for children to learn and revisit as they progress through the school.
- Highlighting key language within each unit so that children can talk with confidence about the skills they are using.
- Providing children with a language of computer systems, so that they can explain how things work beyond the surface level.
- Allowing children opportunities to use key vocabulary to demonstrate their learning.
- Confidently use language structures to sequence.

Scaffolding/supporting SEND/lowest 20%: What do we do and how does this look?

Teachers try to identify potential barriers at the planning stage. In their planning, they consider ways of minimising or reducing those barriers.

Lesson design:

- Recapping learning from the previous lesson. Children may revisit their work from the last lesson to remember/improve/tweak/adjust.
- Consolidation is built in through curriculum design. Opportunities are provided for pupils to repeat and reinforce previously learnt skills and processes on a regular basis, in similar and different contexts.
- The curriculum is designed in a way that allows pupils to make links to the real world.
- Scaffolded tasks to support those need additional support.
- Whole class discussions (e.g. the teacher may do a mini plenary where common misconceptions are identified and discussed or where they share examples of pupil work on the board).

Environment

- Key vocabulary displayed on the board so children can use correct terminology in their discussions.
- Flexible seating options in case children need to move during the lesson.

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Resources

- Adult support (e.g. additional modelling or explanation)
- Peer support
- Checklist of steps to complete (e.g. on the flip chart or slides printed)
- Visual prompt cards

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