

COMPUTING POLICY



Policy Document Status			
Date of Policy Creation	February 2023	Chair of Governors	Gill Stubbs
Adoption of policy by Governing Board	17 May 2023	Executive Headteacher	Denise Garner
Inception of new Policy	18 May 2023	Governor/Staff Member Responsibility	Linzi Crane
Date of policy review	May 2024	Day Care Manager	Shelley Thursfield

‘Love, Laugh, Learn’

Resourcefulness, Reciprocity (Teamwork), Reflectiveness, Resilience

Rationale

This policy outlines the school’s practice and procedures relating to the delivery of the Computing curriculum. The use of 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 Wrockwardine Wood Infant School we recognise that children 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. The purpose of this policy is to state how the school intends to make this provision.

Curriculum Intent

A high-quality computing curriculum will help equip children with the confidence and capability to use computing throughout their later life. It inspires and encourages children to use computational thinking and creativity to understand the world. The curriculum is planned so children are given opportunities to play and gain hands on experience. This will equip children with the knowledge and skills they need to teach children how to be responsible, competent, confident, and creative users of information technology (IT)

Our curriculum will help children to:

- ✓ develop the understanding of how to use computing safely and responsibly so children understand how to be a responsible online citizen and have a good understanding of digital literacy.
- ✓ develop children’s understanding of computational thinking and knowledge through high quality teaching and carefully thought-out sequences of lessons.
- ✓ teach children how to be responsible, competent, confident, and creative users of information technology (IT)
- ✓ allow children time to explore and play with a range of technologies both digital and non-digital.
- ✓ help children to understand and apply the fundamental principles of computer science, including logic, debugging and algorithms.
- ✓ express themselves and develop ideas through IT.
- ✓ provide deep links with mathematics, science and design and technology.
- ✓ evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

- ✓ be digitally literate so they can use IT purposefully to create, organise, store, manipulate and retrieve digital content.

Early years

It is important in the foundation stage to give children a broad, play-based experience of computing in a range of contexts, including outdoor play. Computing is not just about computers. Our early years learning environments will feature computing scenarios based on experience in the real world, such as in role play e.g., a toaster and a kettle. During this play the children, when ready, will work out for themselves how they work and this may well be supported by an adult using open-ended questioning such as, “What happens when you press...?”, “How do you view...?”. Children will gain confidence and control, by making remote control vehicles move or recording information using a camera. Over the year a range of technologies will be introduced to the children in this way: metal detectors, digital magnifiers, programmable toys, MP3 recorders, video cameras and, of course, computers with appropriate software.

Curriculum Implementation

- ✓ Through professional development all staff gain the necessary subject knowledge to teach computing to a high standard.
- ✓ Teachers will develop children’s understanding of computing through well thought-out sequences of lessons, so children build their knowledge and skills in a progressive way.
- ✓ Teachers will have access to in-depth curriculum planning and high-quality resources. Planning will ensure that children are given opportunities to think in a critical way, develop skills of enquiry, debate, interpretation, and problem solving so they understand how to use technology in different ways.
- ✓ Lessons will be planned to provide children with opportunities to be computational thinkers, giving them time to express themselves and develop their ideas through IT.
- ✓ Assessment evidence and pupil voice will allow teachers to measure children’s understanding to ensure they are becoming responsible, competent, confident, and creative users of information technology (IT)
- ✓ We will develop the fundamental principles of computer science skills, using subject specific vocabulary.
- ✓ The school’s computing curriculum has the flexibility to meet the individual needs and abilities of each child.

Planning

Staff will follow the long term and medium-term plans with objectives set out in the national curriculum and use the same format for their weekly planning sheet.

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We recognise that all classes have children with widely differing computing abilities. This is especially true when some children have access to equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways, by

- ✓ Setting common tasks which are open-ended and can have a variety of responses.
- ✓ Setting tasks of increasing difficulty (not all children complete all tasks).
- ✓ Grouping children by ability in the room and setting different tasks for each ability group.
- ✓ Providing resources of different complexity that are matched to the ability of the child.
- ✓ Using classroom assistants to support the work of individual children or groups of children.

Computing Content

The grid below shows specific Computing learning intentions for each year group over the year.

Year 2	1 st Half term	2 nd Half Term
Autumn	Digital Literacy—Online Safety Staying safe online (Common sense media planning)	Digital Literacy—Online Safety Follow the Digital Trail (Common sense media planning)
	IT Information technology around us/Online Safety	IT Digital Photography
Spring	Digital Literacy—Online Safety E-safety Day (Computing lead to send planning) Use technology safely and respectfully, keeping personal information private.	Digital Literacy—Online Safety Screen out the Mean Introduction to cyberbullying (See Common Sense Media).
	Computer Science Robot algorithms	IT Pictograms/Online Safety
Summer	Digital Literacy—Online Safety Using Keywords (See Common sense media planning)	Digital Literacy—Online Safety Sites I like (See common sense media planning)
	IT Making music/online Safety	Computer Science Introduction to quizzes

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Year 1	1st Half term	2nd Half Term
Autumn	<p>Digital Literacy—Online Safety Keep it private (Common sense media planning)</p> <p>IT Technology around us</p>	<p>Digital Literacy—Online Safety ABC searching (Common sense media planning)</p> <p>IT Digital Painting</p>
Spring	<p>Digital Literacy—Online Safety E-Safety Day theme (Computing lead will share planning)</p> <p>Computer Science Moving a robot</p>	<p>Digital Literacy—Online Safety Going places safely (Common sense media planning)</p> <p>IT Grouping Data/Online Safety</p>
Summer	<p>Digital Literacy—Online Safety My creative work (See Common sense media planning)</p> <p>IT Digital Writing/Online Safety</p>	<p>Digital Literacy—Online Safety Sending Email (See Common sense media planning)</p> <p>Computer Science Introduction to animation</p>

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Reception	1st Half term	2nd Half Term
Autumn	<p>Digital Literacy—Online Safety Technology safari- Hello Ruby</p> <p>Computational Thinking Pumpkin Soup-Link to Harvest -Barefoot Resources</p> <p>IT available in continuous provision Use a computer mouse. To complete a simple program. (Early literacy, Beep Beep, Phonics play, Purple mash, maths games) Use a digital camera on Autumn walk. Roleplay toaster, microwave</p>	<p>Digital Literacy—Online Safety Netsmartz - Router’s birthday surprise</p> <p>Computer Science On/Off Button-Hello Ruby Explore technology in classroom</p> <p>Computational Thinking Winter warmers snowmen and scarves</p> <p>IT available in continuous provision Use a computer mouse. To complete a simple program. (Early literacy, Beep Beep, Phonics play, Purple mash, maths games) Video camera Christmas play Roleplay toaster, microwave</p>
Spring	<p>Digital Literacy—Online Safety Smartie the penguin - eBook</p> <p>Computer Science Me and the computer-Hello Ruby</p> <p>Computational Thinking Feed the birds-Barefoot Computing (Link with the big bird watch)</p>	<p>Digital Literacy—Online Safety Chicken clicking story book</p> <p>Computer Science Remote Control-Hello Ruby Explore the ozobots</p> <p>Computational Thinking Springtime seeds- Barefoot Computing (links with science)</p>

	<p>IT available in continuous provision To create a picture and use basic drawing tools. To type their name on the computer. Use a digital camera on Winter walk.</p>	<p>IT available in continuous provision To create a picture and use basic drawing tools. To type their name on the computer. Use a digital camera on Spring walk.</p>
<p>Summer</p>	<p>Digital Literacy—Online Safety Netsmartz - delivery for Webster</p> <p>Computer Science Tooth Brush algorithm- Hello Ruby (Link to jigsaw healthy me)</p> <p>Computer Science Children explore the kubetto programmable toys. Move forwards, backwards.</p> <p>Computational Thinking Rabbit Run-Barefoot Computing</p> <p>IT available in continuous provision To create a picture and use basic drawing tools. To type their name on the computer. Use a digital camera to take pictures of plants. To become aware of a pictogram to collect information linked to d and t favourite fruit.</p>	<p>Digital Literacy—Online Safety Digi duck story: learn that staying safe online is similar to staying safe in the real world.</p> <p>Computer Science My first computer-Hello Ruby Children explore the kubetto programmable toys. Move forwards, backwards, left and right.</p> <p>Computational Thinking Seaside Tangrams-Barefoot Computing</p> <p>IT available in continuous provision To create a picture and use basic drawing tools. To type their name on the computer. Use a digital camera to take pictures on summer walk To become aware of a pictogram to collect information linked to d and t favourite fruit.</p>

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Nursery	1st Half term	2nd Half Term
Autumn	<p>Digital Literacy- Online safety - Seeks to acquire basic skills in turning on and operating some ICT equipment.</p> <p>Computer Science- Operates mechanical toys, e.g., turns the knob on a windup toy or pulls back on a friction car.</p> <p>Technology hunts and what toys need to operate. Can you operate some ICT equipment?</p> <p>IT available in continuous provision Roleplay -kettle, toaster, microwave Lightbox Laptops Large IWB screen (beep beep, phase 1 early literacy) CD player</p> <p>IT- Shows an interest in technological toys with knobs and pulleys, or real objects such as cameras or mobile phones.</p> <p>Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movement, or new images.</p> <p>Control the kettle, microwave, and toaster.</p>	<p>Digital Literacy—Online Safety Netsmartz - Router’s birthday surprise</p> <p>Computer Science- Knows how to operate simple equipment e.g., turns the CD player on and uses a remote control.</p> <p>Children explore programmable toys. Cars, cats</p> <p>IT available in continuous provision Roleplay -kettle, toaster, microwave Lightbox Laptops Large IWB screen (beep beep, phase 1 early literacy) CD player</p>

Spring

Digital Literacy—Online Safety

Smartie the penguin - eBook

IT- Knows how to operate simple equipment e.g., turns the CD player on and uses a remote control. knows that information can be retrieved from computers.

To use the cd player, play, pause, stop, sound, headphones.

Children learn you can find out information on an iPad/computer.

IT available in continuous provision

Roleplay -kettle, toaster, microwave

Lightbox

Laptops

Large IWB screen (beep beep, phase 1 early literacy)

CD player

Digital Literacy—Online Safety

Chicken clicking story book

Computer Science - Knows how to operate simple equipment e.g. turns the CD player on and uses a remote control.

To control a programmable toys car, cats and complete an obstacle course. Children use the language forward, backwards and turn.

IT available in continuous provision

Roleplay -kettle, toaster, microwave

Lightbox

Laptops

Large IWB screen (beep beep, phase 1 early literacy)

CD player

<p>Summer</p>	<p>Digital Literacy—Online Safety Netsmartz - delivery for Webster</p> <p>IT- knows that information can be retrieved from computers. Completes a simple program on the computer. Complete a simple program on the computer. Children learn to take a picture of tuff cam. Children learn you can find out information on an iPad/computer.</p> <p>IT available in continuous provision Roleplay -kettle, toaster, microwave Lightbox Laptops Large IWB screen (beep, beep, phase 1 early literacy) CD player</p>	<p>Digital Literacy—Online Safety Digi duck story: learn that staying safe online is similar to staying safe in the real world.</p> <p>IT- Completes a simple program on the computer. To begin to use a computer mouse and not just touch screen.</p> <p>Computer Science - Uses ICT hardware to interact with age-appropriate computer software. Give a simple instruction to kubetto. Use the language, forward.</p> <p>IT available in continuous provision Roleplay -kettle, toaster, microwave Lightbox Laptops Large IWB screen (beep, beep, phase 1 early literacy) CD player</p>
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Teaching and Learning Style

As the aims of computing are to equip children with the skills necessary to use technology to become independent learners, the teaching style that we adopt is as active and practical as possible. While at times we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in computing is for individuals or groups of children to use computers to help them in whatever they are trying to study. So, for example, children might research a history topic by on the Internet. Children who are learning science might use the computer to model a problem or to analyse data. We encourage the children to explore ways in which the use of Computing can improve their results, for example, how a piece of writing can be edited or how the presentation of a piece of work can be improved by moving text about, etc.

The Role of the Governors:

- ✓ Nominate a governing body representative with responsibility Computing.

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- ✓ Oversee and monitor the provision of opportunity provided by the school.
- ✓ Liaise regularly with the Subject leader for the Computing curriculum.
- ✓ In partnership with the subject leader, review, and update school policy

Inclusion

At Wrockwardine Wood Infant School and Nursery we plan to provide for all children to achieve, including boys and girls, higher achieving children, gifted and talented children, those with SEN, children with disabilities, children from all social and cultural backgrounds, children who are in care and those subject to safeguarding, children from different ethnic groups and those from diverse linguistic backgrounds.

Resources and access

The school acknowledges the need continually to maintain, update and develop its resources and to make progress towards a consistent, compatible PC system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of computing across the school.

Teachers are required to inform the computing leader of any faults as soon as they are noticed. Resources if not classroom based are in or near the computer trolley. A service level agreement with Telford and Wrekin is currently in place to help support the co-ordinator to fulfil this role both in hardware and audio-visual. Computing network infrastructure and equipment has been sited so that:

- ✓ Every classroom from nursery to Year 2 has a computer connected to the school network and an interactive whiteboard with audio, DVD and video facilities.
- ✓ Each classroom has at least 3 computers.
- ✓ There is one laptop trolleys in school containing 30 laptops with Internet access available to use in classrooms.
- ✓ Each class from Year 1 to Year 2 has an allocated slot across the week for teaching of specific computing skills.
- ✓ The laptops are available for use throughout the school day as part of computing lessons and for cross-curricular use.
- ✓ Children may use computing independently, in pairs, alongside support staff or in a group with a teacher.

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Along with desk top computers, the school has the following:

Hardware	Software	Subscriptions
colour printer and scanner	Purple Mash which incorporates: <ul style="list-style-type: none"> ✓ a word processing package ✓ painting/drawing software ✓ a multimedia program ✓ database programs ✓ control programs ✓ photo editing software ✓ video editing software 	ten town
digital cameras		phonics play
tuff Cam cameras		Mathletics
digital blue microscope		bug club
visualizers		purple mash
Ipads		espresso
robots (Bee-Bots, Cubetto, Ozobot, remote control cats and cars)		Calm Brain
bee bot mats		Floppy Phonics
laptops		

Technician

The school employs a qualified technician. He is responsible for installation of new software, maintenance of hardware and offers support to staff where difficulties arise. The technician is in school every two weeks for a full day.

Cross Curricular Links

Computing contributes to teaching and learning in all curriculum areas. For example, graphics work links in closely with work in art, and work using databases supports work in maths, while the Internet proves very useful for research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way.

English

IT is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. They learn how to improve the presentation of their work by using desk-top publishing software.

Mathematics

Many IT activities build upon the mathematical skills of the children. Children use computing in mathematics to collect data, make predictions, analyse results, and present information graphically.

Spiritual Moral Social Cultural and Citizenship

Computing contributes to the teaching of SMCS and citizenship as children learn to work together in a collaborative manner. They develop a sense of global citizenship by using the Internet and email. Through the discussion of moral issues related to electronic communication, children develop a view about the use and misuse, and they also gain a knowledge and understanding of the interdependence of people around the world.

Health and Safety and Safeguarding

The school is aware of the health and safety issues involved in children's use of computing. All electrical appliances in school are tested accordingly. It is advised that staff should not bring their own electrical equipment in to school but if this is necessary, then the equipment must be PAT tested before being used in school. This also applies to any equipment brought into school by, for example, people running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people. All staff should visually check electrical equipment before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to the IT technician, bursar or head teacher who will arrange for repair or disposal.

(See our Online Safety, Child Protection and Safeguarding and Anti-Bullying policies)

The Role of the Subject Leader

The monitoring of the standards of the children's work and of the quality of teaching in computing is the responsibility of the subject leader. The subject leader is also responsible for supporting colleagues in the teaching of computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The subject leader gives the head teacher an annual summary report in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement. The subject leader has specially allocated time for carrying out the vital task of reviewing samples of the children's work and for visiting classes to observe the teaching.

The subject leader will:

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- ✓ exemplify effective practice for children in their own professional practice and provide or facilitate coaching/mentoring support for colleagues.
- ✓ Initiate strategies which support the professional development of colleagues to improve the school capacity to ensure the full development of computing.
- ✓ Work with SLT to monitor and evaluate provision and implement an action plan for whole school improvement as necessary.
- ✓ Provide a resource base to ensure that all adults in the school can effectively deliver the elements of computing.

The role of the Class Teacher

Teachers need to:

- ✓ ensure that their timetables incorporate designated time for Computing on a weekly basis.
- ✓ be aware of the National curriculum aims and that they are being covered by the Medium-Term planning.
- ✓ give children opportunities to work in a variety of group settings.
- ✓ ensure that the direct teaching of Computing
- ✓ Provide parents/carers with statements of their child's progress in their computing development in their annual report and through parent/teacher consultation.
- ✓ ensure that children will have an equal opportunity to develop their potential within Computing, regardless of gender, ability, culture, or religious background in line with the school's policy on equal opportunities.

Security

- ✓ The Computing technician and Telford and Wrekin will be responsible for regularly updating anti-virus software and filtering.
- ✓ Use of computing will be in line with the school's 'Acceptable Use Policy' (AUP). All staff, volunteers and children must sign a copy of the schools AUP.
- ✓ Parents will be made aware of the 'acceptable use policy'.
- ✓ All children and parents will be aware of the school expectations for responsible use of computing and the Internet and will understand the consequence of any misuse.
- ✓ The agreed rules for safe and responsible use of computing and the Internet will be displayed in all computing areas.

Involving parents and carers

The school believes that it is important to have the support of parents, carers and the wider community for the Computing programme. Parents and carers are given the opportunity to find out about the computing curriculum through:

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- ✓ Parent/carer curriculum meetings and workshops
- ✓ Online safety updates
- ✓ Parent/carer teacher consultations
- ✓ School reports
- ✓ Parents can view the Computing policy on the school website.
- ✓ Information leaflets/displays/newsletter.

Links to other policies and curriculum areas

We recognise the clear link between Computing and the following policies and staff are aware of the need to refer to these policies when appropriate.

- ✓ Teaching and Learning Policy
- ✓ Anti-bullying Policy
- ✓ Online Safety Policy
- ✓ Child Protection Policy
- ✓ Behaviour Policy
- ✓ Relationships Sex education and Health Education Policy