

COMPUTING POLICY



Computing Policy - Document Status			
Date of Policy Creation	May 2017	Named Responsibility for Computing	Linzi Crane
Date of Policy Adoption by Governing Body	February 2021	Federated Headteacher	Denise Garner
Review Date	December 2022	Chair of Governors	Gill Stubbs
Date of Policy Adoption by Governing Body	10 th February 2021		

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 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. The purpose of this policy is to state how the school intends to make this provision.

Aims

We aim that through the Computing curriculum our pupils will:

- Provide a relevant, challenging and enjoyable curriculum for Computing for all pupils.
- 2Meet the requirements of the national curriculum programmes of study for computing.
- Use computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use computing throughout their later life.
- To enhance learning in other areas of the curriculum using computing.
- To develop the understanding of how to use computing safely and responsibly.

The new national curriculum for computing aims to ensure that all pupils

- 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.

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- Are responsible, competent, confident and creative users of information and communication technology.(ICT) Explore issues related to living in a democratic society
- Become healthy and fulfilled individuals

The role of the school:

The school believes that computing:

- Gives pupils immediate access to a rich source of materials.
- Can present information in new ways which help pupils understand, access and use it more readily.
- Can motivate and enthuse pupils.
- Can help pupils focus and concentrate.
- Offers potential for effective group working.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Learning and Teaching

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. Early years learning environments should feature computing scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or program a toy. Recording devices can support children to develop their communication skills. This is particular useful with children who have English as an additional language.

Key Stage 1

By the end of 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 a sequence of instructions.
- Write and test simple programs.
- Use logical reasoning to predict and computing the behaviour of simple programs.
- Organise, store, manipulate and retrieve data in a range of digital formats.
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

Planning

As the school develops its resources and expertise to deliver the computing curriculum, modules will be planned using the computing medium term planning in line with the national curriculum and will allow for clear progression. Modules will be designed to enable pupils to achieve stated objectives. Pupil progress towards these objectives will be recorded by teachers as part of their class recording system using photograph and video form and evidence and in theme books. 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. 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 the National Curriculum requirements for Key stage 1:

Computing – key stages 1 and 2

Subject content

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.

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

Reception

Reception	1st Half term	2nd Half Term
Autumn	<p>Digital Literacy- E-safety</p> <p>Technology hunts</p> <p>IT Use a computer mouse. To complete a simple program. (Early literacy, Beep Beep, Phonics play, Purple mash, maths games)</p> <p>Use a digital camera.</p>	<p>Digital Literacy- E-safety</p> <p>Netsmartz - Router's birthday surprise</p> <p>Computer Science Children explore programmable toys. Move forwards, backwards, left right, move through an obstacle course.</p>
Spring	<p>Digital Literacy- E-safety</p> <p>Smartie the penguin - eBook</p> <p>IT To log on purple mash. To create a picture and use basic drawing tools. To type their name on the computer.</p>	<p>Digital Literacy- E-safety</p> <p>Chicken clicking story book</p> <p>Computer Science Give a simple instruction to a beebot. Can they move to a particular place on a mat?</p>
Summer	<p>Digital Literacy- E-safety</p> <p>Netsmartz - delivery for Webster</p> <p>IT Use a video camera. To use a pictogram to collect information.</p>	<p>Digital Literacy- E-safety</p> <p>Digi duck story: learn that staying safe online is similar to staying safe in the real world.</p> <p>IT To begin to save on purple mash.</p> <p>Computer Science</p>

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		To control a sprite on the computer. (Purple mash)
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Year 1

Year 1	1st Half term	2nd Half Term
Autumn	<p>Digital Literacy- E-safety Keep it private (Common sense media planning)</p> <p>IT Creating pictures</p>	<p>Digital Literacy- E-safety ABC searching (Common sense media planning)</p> <p>IT Using a digital camera</p>
Spring	<p>Digital Literacy- E-safety E-Safety day theme (Computing lead will share planning)</p> <p>Computer Science Programming iRobot</p>	<p>Digital Literacy- E-safety Going places safely (Common sense media planning)</p> <p>IT Representing information – pictograms</p>
Summer	<p>Digital Literacy- E-safety My creative work (See Common sense media planning)</p> <p>IT Using a digital video camera</p>	<p>Digital Literacy- E-safety Sending Email (See Common sense media planning)</p> <p>IT Understand how to use a spell check, logon and save work.</p>

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Year 2

Year 2	1st Half term	2nd Half Term
Autumn	<p>E-Safety and Digital Literacy: Staying safe on line (Common sense media planning)</p> <p>IT- Writing stories, communication information using text</p>	<p>E-Safety and Digital Literacy: Follow the Digital Trail (Common sense media planning)</p> <p>IT Multimedia Presentations – ICT in the World Around You</p>
Spring	<p>E-Safety and Digital Literacy: E-safety Day (Computing lead to send planning) Use technology safely and respectfully, keeping personal information private.</p> <p>Computer Science Programming: Say that again! Create and debug simple programs</p>	<p>E-Safety and Digital Literacy: Screen out the Mean Introduction to cyberbullying (See Common Sense Media).</p> <p>IT Questions and answers</p>
Summer	<p>E-Safety and Digital Literacy: Using Keywords (See Common sense media planning)</p> <p>IT Recording and Editing</p>	<p>E-Safety and Digital Literacy: Sites I like (See common sense media planning)</p> <p>IT Any extra computing to fill gaps.</p>

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.
- 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 pupils to achieve, including boys and girls, higher achieving pupils, gifted and talented pupils, those with SEN, pupils with disabilities, pupils from all social and cultural backgrounds, children who are in care and those subject to safeguarding, pupils 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 located in the computer suite. 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.

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- There is one laptop trolleys in school containing 16 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.
- Pupils may use computing independently, in pairs, alongside a TA or in a group with a teacher.
- A governor will be invited to take a particular interest in computing in the school.

Along with the computers, the school has the following:

Hardware

- colour printers
- scanners
- digital cameras
- tuff Cam cameras
- digital blue microscope
- visualizers
- Ipads
- robots (Bee-Bots, cubetto, ozobot, remote control cats and cars)
- bee bot mats
- lego programmable toys
- laptops
- light box
- microwave, kettle, toaster

Software

- Purple Mash which incorporates:
 - a word processing package
 - painting/drawing software
 - a multimedia program
 - database programs
 - control programs
 - photo editing software
 - video editing software

Subscriptions to:

- ten town
- phonics play
- mathletics
- bug club
- purple mash

Technician

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- 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

The contribution of computing to teaching in other curriculum areas

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.

Maths

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.

SMSC and Citizenship

Computing makes a contribution 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 E-safety 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 needs to:

- Exemplify effective practice for pupils 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 social and emotional learning for all children.
- 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 are able to effectively deliver the elements of the Jigsaw programme.

Security

- The Computing technician and Telford and Wrekin will be responsible for regularly updating anti-virus software and filtering.

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- Use of computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools AUP.
- Parents will be made aware of the 'acceptable use policy'.
- All pupils and parents will be aware of the school rules 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.

The role of the Class Teacher:

- Teachers need to ensure that their timetables incorporate designated time for Computing on a weekly basis
- Teachers need to be aware of the National curriculum aims and that they are being covered by the Medium-Term planning.
- Teachers need to give pupils opportunities to work in a variety of group settings.
- Teachers need to ensure that the direct teaching of Computing will follow a thematic approach through cross curricular work using the Medium-Term plans for each year group
- Provide parents/carers with statements of their child's progress in their computing development in their annual report and through parent/teacher consultation.
- All teachers will 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.

Monitoring and Review

The Head teacher and computing subject leader are responsible for monitoring the standards of children's work and the quality of learning and teaching. The Head teacher and subject leader supports colleagues in the teaching of Computing and giving information about current developments in the subject and by providing a strategic lead and direction for the subject in school. All

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staff are responsible for evaluating strengths and weaknesses in the subject and indicating areas for further improvement. The Computing subject leader is responsible for keeping evidence of the teaching and learning of Computing and for implementing and evaluating an action plan each year.

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:

- ❖ Parent/carer curriculum meetings.
- ❖ Parents'/carers' evenings
- ❖ 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
Acceptable use Policy
E-safety Policy
Child Protection Policy