Newport Infant School and Nursery

Computing Policy

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Policy Lead	Alison Goddard, Computing Leader
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This policy outlines the aims and strategic approach of Newport Infant School and Nursery for the effective delivery of Computing across the school. It should be read alongside other key school policies, including those for Teaching and Learning, SEND, Online Safety, Safeguarding, and Assessment.

The policy has been developed by the Computing Leader, drawing on guidance from educational consultants and feedback gathered through pupil, parent, and staff voice questionnaires. These valuable insights have helped shape the policy and will continue to inform its development over time. Grounded in the statutory and recommended programmes of study provided by the government, this policy recognises the rapidly evolving nature of technology. To ensure it remains relevant and responsive to current trends, it will be reviewed at least annually, at the start of each academic year.

Aims:

The KS1 National Curriculum for computing aims to ensure that all pupils:

- 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

Intent

Initially, it is worth quoting the purpose of computing in the National Curriculum Programme of Study:

'A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is Computer Science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems, and a range of contexts. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.'

At Newport Infant School and Nursery, we believe that computing is an exciting, exploratory, and valuable subject that plays an essential role in modern education. Our aim is to deliver a broad and balanced curriculum that nurtures key skills across the three strands of computing: Computer Science, Information Technology, and Digital Literacy.

Through this curriculum, pupils will develop a foundational understanding of computing, including algorithms, simple programming, logical reasoning, and prediction. They will also learn how to store, manipulate, and retrieve digital content purposefully and creatively, and gain an awareness of how technology is used in the wider world. We are committed to ensuring that children develop a strong, age-appropriate understanding of how to stay safe when using modern technology and the internet. This knowledge will help pupils feel confident, protected, and well-informed, empowering them to self-regulate and make responsible choices in a digital world.

At Newport Infant School and Nursery, we believe every child has the right to a curriculum that supports them in reaching their full potential. We recognise the immense value that technology brings—not only to the

computing curriculum but to the wider curriculum and everyday school life. Technology enhances learning by enabling collaboration, increasing pupil engagement, providing access to rich and varied content, and supporting the understanding of new and complex concepts. Most importantly, it helps meet the diverse needs of all our learners, ensuring that every child can thrive in our digital world.

Curriculum – Implementation

The computing curriculum at Newport Infant School and Nursery is carefully planned to ensure that all children have the opportunity to develop essential digital skills that will support their learning as they progress through the key stages. We have adopted the government-approved and funded **NCCE Teach Computing Scheme**, which provides a strong and structured foundation for computing education.

To complement this, we also incorporate elements from **Purple Mash**, a child-friendly platform that mirrors many real-world digital tools. By using Purple Mash alongside the Teach Computing scheme, we offer pupils a safe and accessible way to explore technology, while gradually introducing them to systems they are likely to encounter beyond school. This platform encourages responsible digital behaviour, such as logging in with individual usernames and passwords, understanding the importance of keeping passwords secure, and learning how to log out of applications safely.

Our computing curriculum encourages children to explore, experiment, and use technology purposefully. This hands-on approach helps prepare them for future learning by introducing them to key computing concepts in an age-appropriate way. We work closely with Newport Junior School to ensure curriculum continuity and progression. As both schools follow the Teach Computing scheme, children are able to revisit and build upon their foundational knowledge as they move through their education journey.

To support high-quality learning experiences, pupils have access to a range of digital tools including **iPads, laptops, and programmable robots (Bee-Bots)**. While Bee-Bots are used to introduce coding and sequencing, we also deliver **unplugged activities** to develop children's understanding of key concepts like algorithms and debugging in a hands-on, screen-free way. Each classroom is also equipped with a **Clevertouch interactive whiteboard**, which further enhances teaching and learning through engaging digital resources.

Early Years:

Although computing is not explicitly outlined in the Early Years Foundation Stage (EYFS) framework, at Newport Infant School and Nursery we recognise the value of technology in supporting and enhancing early learning. We use technology purposefully across the EYFS to help children develop foundational skills that will support a smooth transition into the Year 1 computing curriculum.

In the Early Years, children are introduced to key computing concepts through engaging, play-based activities. They learn to follow instructions, use programmable toys such as Bee-Bots, and engage with interactive whiteboard games to support learning across different areas of the curriculum. Technology is embedded within continuous provision, offering opportunities for children to explore, interact, and use both real and role-play digital devices creatively. These may include pretend phones, keyboards, laptops, tills, and cameras, alongside real tools such as iPads, digital cameras, Bee-Bots, and interactive whiteboards.

We believe technology plays a vital role in everyday life, and it is important for children in the foundation stage to experience a broad and meaningful introduction to digital learning. This includes practical, hands-on experiences both indoors and outdoors, such as those inspired by Barefoot Computing activities.

Importantly, computing in the Early Years is not limited to screen time. It is about developing problem-solving skills, logical thinking, and communication. Through role-play and real-life contexts, children gain confidence and control as they use directional language to 'program' each other to find hidden objects, create artwork using digital drawing tools, or operate simple programmable toys. These rich, meaningful experiences help build a strong foundation for future computing learning.

Assessment

Assessment is regarded as an integral part of teaching and learning and is a continuous process.

All teachers should

- know and understand how to assess the relevant subject and curriculum areas, including statutory assessment requirements
- Make use of formative and summative assessment to secure pupils' progress
- Use relevant data to monitor progress, set targets and plan subsequent lessons
- Give pupils regular feedback, both orally and through accurate marking, and encourage pupils to respond to the feedback

Formative Assessment

Each lesson from the NCCE is designed with clear opportunities for formative assessment, which are outlined in the lesson plan. These assessments help teachers identify and address misconceptions as they arise, ensuring that learning remains on track. Lessons should begin with a recap or recall of prior learning to activate pupils' memory and reinforce understanding. Teachers are encouraged to use skilful questioning throughout the session to gauge pupils' starting points, assess current knowledge, check for conceptual understanding, and uncover any misconceptions.

Formative assessment plays a key role in enabling teachers to adapt their teaching in real-time—helping pupils connect new learning to prior knowledge and ensuring progress is built incrementally and meaningfully.

At the end of each session, assessment tools should be used to determine whether the intended learning objectives have been met. This information also informs planning for subsequent lessons and contributes to a broader understanding of each pupil's progress ahead of summative assessments. Pupils are also encouraged to reflect on their own learning by using self-assessment tools such as thumbs up, thumbs down, or thumbs to the side. This simple strategy reinforces the content covered and supports pupils in developing awareness of their own learning journey.

Summative Assessment

Summative assessment in computing is used to review pupils' overall capability and provide a best-fit judgement of their attainment. Independent tasks throughout each unit offer multiple opportunities for pupils to demonstrate their understanding and apply their skills. These tasks also allow for meaningful pupil reflection and the identification of next steps in their learning journey. At the end of each unit, teachers make a summative judgement for each pupil—evaluating whether they are working towards, meeting, or exceeding the expected outcomes. This is guided by the NCCE Rubric assessment grids, which clearly outline the progression steps and success criteria for each unit.

Assessment in computing is focused on evaluating pupils' understanding of key concepts and skills rather than their reading or writing ability. To support this, particularly in Key Stage 1, we use rubric-based assessments. These rubrics help ensure a consistent, focused approach and indicate whether a pupil is emerging, expected, or exceeding in relation to age-related expectations. Throughout each term, both informal observations and formal assessment tools are used to build a holistic picture of each child's progress in computing.

Resources

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum. Teachers are required to inform the Computing Subject Leader of any faults as soon as they are noticed. A service level agreement with Telford and Wrekin is currently in place to help support the subject leader to fulfil this role both in hardware and software.

Pupils are able to experience and explore a range of digital devices, which may inFclude laptops and tablet computers. Pupils should also experience hardware designed for specific purposes e.g. floor robots/Bee-Bots.

- Every classroom from Nursery to Y2 has access to a teacher computer, connected to the school network and an interactive touch screen board with sound
- There is an iPad Sync & Charge cabinet in school containing 30 iPads. Each class also has a teacher iPad for class teachers and teaching assistants to use
- The school has a Clevertouch screen on a mobile height adjustable trolley, for use in assemblies and group teaching in the hall.
- The school has access to BeeBots to support the NCCE scheme of work
- Pupils may use IT and Computing resources independently, in pairs, alongside a TA or in a group with a teacher.
- The school has a Computing technician who is in school for an afternoon every fortnight
- A governor will be invited to take a particular interest in Computing in the school.

Inclusion/Pupils with Special Educational Needs (SEN)

At Newport Infant School and Nursery, we are committed to ensuring that all children have equal access to IT and Computing, enabling every pupil to reach their full potential. This includes children of all abilities, from a range of social and cultural backgrounds, as well as those with special educational needs (SEN), disabilities, or English as an additional language (EAL).

Through high-quality computing teaching, we aim to provide meaningful and accessible learning opportunities that support strong progress for all. We achieve this by setting appropriately challenging tasks, adapting to individual learning needs, and selecting activities that are tailored to the developmental stage of each year group.

Where necessary, technology is used to provide additional support—for example, offering one-to-one interventions for SEN pupils or enabling children to use iPads or laptops to complete writing tasks. By using

technology flexibly and thoughtfully, we strive to remove barriers and promote inclusive learning experiences for every child.

Monitoring and evaluation

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the school's monitoring cycle.

Monitoring will be achieved by:

- Work scrutiny
- Learning walks
- Pupil voice
- Parent voice
- Staff questionnaires
- Reflective teacher feedback
- Dedicated subject leader time

Staff training

The Computing Subject Leader will assess and address staff training needs as part of the annual development plan process or in response to individual needs and requests. Teachers will be encouraged to use IT and Computing to produce plans, reports, teaching resources and to communicate with parents.

Health and Safety

Newport Infant School and Nursery takes all necessary measures to ensure both staff and pupils are aware of the importance of health and safety. Both staff and pupils are trained to handle electrical equipment correctly. Pupils are reminded about the dangers of electricity and the danger signs to look out for.

In addition:

- Children should not put plugs into sockets or switch the sockets on
- Trailing leads should be made safe behind equipment
- Liquids should not be taken near the computers

Security

- The Computing technician will be responsible for regularly updating anti-virus software.
- SENSO is used to monitor all students and staff.
- use of IT and Computing will be in line with the school's 'Acceptable Use Policy'.
- All staff, volunteers and children must sign a copy of the school's Acceptable Use Policy
- Parents will be made aware of the 'acceptable use policy' from school entry to the end of KS1.
- All pupils and parents will be aware of the school rules for responsible use of IT and Computing and the internet and will understand the consequence of any misuse.

Roles and Responsibilities

Headteacher

- Monitoring the implementation of the Computing policy and its associated policies.
- Ratifying (in conjunction with the Governing Body) the Computing policy and subject leader action plan.
- Securing technical support service contracts and infrastructure maintenance contracts.
- Approving CPD and training.
- Approving budget bids.
- Monitoring the performance of the Computing Leader.
- Ensuring any government legislation is being met.

Subject Leader

- Supporting all members of staff in their teaching, planning and assessment of Computing
- Sharing new ideas, approaches and initiatives
- Creating Action Plans for Computing and supporting a long-term vision, which feeds into the whole school development plan.
- Reviewing the Computing curriculum and developing as needed.
- Raising the profile of Computing within the school community.
- Monitoring the standards of Computing and feeding back to staff.
- Ensuring assessment systems are in place for Computing.
- Auditing the needs of the staff in terms of training/CPD.
- Using nationally recognised standards to benchmark Computing
- Keeping an up to date log of resources for all staff.
- Working as needed with the SENCO/Headteacher to ensure online safety provision is above adequate and all legislation is in place.

Technician

- Conducts routine schedules maintenance/updates on the school system.
- Supports the administration and set-up of online services including the school website.
- Fixes errors and issues with hardware and software set up.
- Routinely checks school's filtering, monitoring and virus protection.
- Sets up new hardware and installations.
- Maintains network connectivity and stability.
- Supports the Computing Leader and Head Teacher with future infrastructure needs and projected costs.

Safeguarding: Online Safety

Online safety has a high profile at our school. We ensure this profile is maintained and that pupil needs are met by the following:

- A relevant up-to-date curriculum for online safety which is progressive from Early Years to the end of Key Stage One.
- A curriculum that is threaded throughout other curriculums and embedded in the day-to-day lives of our pupils.
- Training for staff which is relevant to their needs and benefits pupils.
- Pupil voice sessions and learning walks that steer changes and inform training needs.
- Through our home/school links and communication channels, parents are kept up to date with relevant online safety matters, policies and agreements. Parents know who to contact if they have an online safety concern.
- Staff sign an Acceptable Use Agreement.
- Our online safety policy clearly states how monitoring of online safety is undertaken and any incidents are dealt with promptly.
- Filtering and monitoring systems for all our online access.
- Data policies which stipulate how we keep confidential information secure.
- We have a governor with responsibility for Online Safety, who works closely with the Headteacher, Computing Lead and Technician to ensure the requirements of KCSIE are adhered to.

See more information in the Online Safety Policy