



Computing Policy

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Rationale and Intent

At William Reynolds Primary School, we support all pupils in using a range of technology with purpose and enjoyment. Technology is continuously and rapidly evolving and therefore, we believe, computing is an integral part of preparing children for the wider world. 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.

Our principle aims - from the National Curriculum in England - for Computing are for pupils to:

- understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- 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

The core of our Computing curriculum is the National Curriculum for England which is supported by Purple Mash.

The curriculum has been specifically sequenced in a logical progression to ensure that new knowledge and skills build on what has been taught before: Year 1 to Year 6. This enables our pupils to know more and remember more. End points and target points within objectives are identified for each year group through a whole school Computing progression plan.

All pupils in Key Stage 1 and 2 participate in four units of Computing throughout the year with online safety embedded within these units. 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 and edit programs, systems, and a range of content. 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.

Teaching and learning

Foundation stage

Within the EYFS, the curriculum no longer has an Information Technology strand however we are keen to ensure pupils know how to stay safe when using the internet. Pupils have the opportunity to explore using Beebots, walkie-talkies, the light tray, basic software on the computers and take photographs using iPads. These skills help them to prepare for a more formal computing curriculum in Year 1.

Key Stages 1 and 2

In Key Stage 1, pupils are 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. In coding lessons, pupils create and debug simple programs and use logical reasoning to predict the behaviour of simple programs. Using Purple Mash, pupils use technology purposefully to create, organise, store, manipulate and retrieve digital content. Pupils are taught to recognise common uses of information technology beyond school and how to 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.

Building on the skills taught, pupils in Key Stage 2 are taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs, work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for global communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information
- use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Medium term planning

Every year group has a yearly Curriculum Map that outlines the key areas of Computing which will be taught throughout the year. Detailed Medium Term planning, from Purple Mash, supports teachers to plan a sequence of progressive lessons and over time, giving the children opportunities to master new substantive concepts. Within this document, key objectives, success criteria and vocabulary are outlined as well pictorial examples of the learning to take place. Progression documents, used to support the Medium-term plan, ensure that staff are delivering a consistent curriculum that increases in complexity.

Role of the Subject leader

- To keep the written policy document and scheme of work up to date and evaluate the content and ways of working.
- To keep up to date with new thinking and ideas linked to history.
- To identify if any support/CPD is needed
- To support teachers in their own subject knowledge.
- To support teachers in terms of levels of expectation of children's attainment.
- To monitor the outcome for pupils and track pupil progress.
- To advise colleagues on planning, delivering and assessing Computing
- To monitor the effective use of technology
- To ensure progression in Computing
- To co-ordinate and oversee equipment maintenance.

Use of ICT

Pupils' work is stored within Purple Mash to show a record of their independent learning journey. Teachers and the subject leader can monitor these to ensure progress over time. Where possible, pupils can use taught skills such as how to use a search engine for research purposes using the most reliable sources. Within the lesson, teachers check pupils' understanding effectively and address any misconceptions through regular feedback. The curriculum is designed and delivered in a way that allows pupils to know more and remember more. Key skills and knowledge are embedded in their long-term memory so they can apply their learning further.

Online Safety

As part of our commitment to Safeguarding, online access during lessons is carefully planned for and monitored. To support children's learning in Computing, pupils will use specific online content, maps, videos and images on the computer. These will be carefully selected by the teacher to ensure that they add value or consolidate the learning and that they are age appropriate and safe. Pupils are also encouraged to use safe search engines, such as KidRex, to ensure research is filtered safely e.g. KS1 or KS2.

Pupils and parents read, agree and sign an **E-awareness Policy** to say that they understand and comply with our agreed school rules on how to be safe. The 'Think then Click' agreement is then returned to school and kept as a log for permission.

Spiritual, Moral, Social and Cultural Education

Computing offers opportunities to support the social development of pupils through the way we expect them to work with each other in lessons. Groupings allow pupils to work together and give them the chance to discuss their ideas and feelings about their own work and the work of others. Their work helps them to develop a respect for the abilities of other pupils and encourages them to collaborate and co-operate across a range of activities and experiences. The pupils learn to respect and work with each other and with adults, thus developing a better understanding of themselves.

Resources

The school is well-equipped to support the Computing curriculum with a computer suite which is timetabled for each year group to ensure that an adequate amount of time and coverage is allocated to each key unit. In addition to this, each class has a mini suite of 4 computers and 6 iPads. Within KS2, each year group has an additional 30 laptops.

All pupils have access to Purple Mash, Bug club/Oxford Owl and TT Rockstars at home using an individual password provided by school.

Equal opportunities

Equal opportunities are considered when we decide upon the resources we provide and the teaching strategies we employ. In our curriculum planning we ensure that all children, with due respect to their culture, religion and background, have equal access to all areas of the curriculum, extracurricular activities, all areas of the school grounds, equipment and resources.

The school's Wellbeing Champions work alongside teachers to promote key messages on e-safety linked through whole school behaviour and personal development, throughout the year. Through regular CPD, the subject leader and senior leaders, ensure that the 4 areas of risk: content, contact, conduct and commerce are monitored working in conjunction with Telford and Wrekin ICT Gold Service.

Impact

The impact of our curriculum is that pupils:

- Stay safe and conduct themselves appropriately using a range of different technologies and online services
- are responsible, competent, confident and creative users of information and communication technology
- make progress in computer science through taking risks, becoming resourceful and innovative.
- understand the value of technology - how it is used in everyday life and constantly evolving
- are prepared for their next stage in computing education and beyond.
- Teachers are well-resourced to deliver the computing curriculum