William Fletcher Primary School

Computing Policy

William Fletcher School is a Rights Respecting School, this policy reflects Articles 17 (access to information) 24 (access to health education) 28 (right to education) 29 (goals of education).

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At William Fletcher Primary we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

Intent

The school's aims are to:

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Develop pupil's computational thinking skills that will benefit them throughout their lives.
- Meet the requirements of the national curriculum programmes of study for computing at Key Stage 1 and 2
- To respond to new developments in technology
- To equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- To enhance and enrich learning in other areas of the curriculum using IT and computing.
- To develop the understanding of how to use computers and digital tools safely and responsibly

The 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.
- are responsible, competent, confident and creative users of information and communication technology.

Early Years

In EYFS, children are given opportunities to explore the use of technology and develop a familiarity with different equipment and vocabulary. This can include: using the interactive whiteboard for drawing or games; taking a photograph with a tablet; using a programmable toy e.g. Beebot; searching for information on the internet as a class; watching a video clip and listening to music. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and exploring programmable toys. During circle times, children learn and discuss the different factors that support their overall health and wellbeing including sensible amounts of screen time.

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.

By the end of key stage 2 pupils should be taught to:

- design and write 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; generate appropriate inputs and predicted outputs to test programs
- use logical reasoning to explain how a simple algorithm works 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 communication and collaboration
- describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Planning

The school uses Kapow Computing - a whole-school scheme of work for EYFS to Year 6 pupils. Kapow fully meets the objectives of the National Curriculum for Computing and allows for clear progression in computing.

Our computing scheme aims to instill a sense of enjoyment around using technology and to develop

pupil's appreciation of its capabilities and the opportunities technology offers to, create, manage, organize, and collaborate. Tinkering with software and programs forms a part of the ethos of the scheme as we want to develop pupils' confidence when encountering new technology, which is a vital skill in the ever evolving and changing landscape of technology. Through our curriculum, we intend for pupils not only to be digitally competent and have a range of transferable skills at a suitable level for the future workplace, but also to be responsible online citizens.

The scheme of work enables pupils to meet the end of Key Stage Attainment targets outlined in the National curriculum.

Where appropriate, IT and computing should be incorporated into schemes of work for other subjects. IT and computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding.

Implementation

The National Curriculum purpose of study states:

'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 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'.

Therefore, our scheme of work is designed with three strands which run throughout:

- **Computer Science**
- **Information technology**
- **Digital literacy**

The Kapow National Curriculum mapping document shows which of the units cover each of the National Curriculum attainment targets as well as each of these three strands.

The Computing Progression of Skills document shows the skills that are taught within each year group and how these skills develop year on year to ensure attainment targets are securely met by the end of each key stage.

Our scheme is organised into five key areas, creating a cyclical route through which pupils can develop their computing knowledge and skills by revisiting and building on previous learning:

<u>Computer systems and networks</u>

<u>Programming</u>

<u>Creating media</u>

<u>Data handling</u>

<u>Online safety</u>

The implementation of our Computing scheme of work ensures a broad and balanced coverage of the National Curriculum requirements, and the 'Skills showcase' units provide pupils with the opportunity to learn and apply transferable skills. Where meaningful, units have been created to link to other subjects such as science, art, and music to enable the development of further transferable skills and genuine cross-curricular learning.

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work as well as unplugged and digital activities. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

Strong subject knowledge is vital for staff to be able to deliver a highly effective and robust computing curriculum. The units of lessons include teacher videos from Kapow to develop staff subject knowledge and support ongoing CPD. This supports teachers to feel confident delivering the computing curriculum and to deliver lessons of a high standard that ensure pupil progression.

Inclusion

We believe that all children have the right to access IT and computing. We recognise that in all classes there are children with particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This includes more able pupils, those with SEND or those who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils.

Differentiated guidance is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required.

Resources and access

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 and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. Computing network infrastructure and equipment has been sited so that:

- Every teacher from EYFS to Y6 has a laptop connected to the school network and an interactive whiteboard is available in each classroom.
- Internet access is available in all classrooms.
- Laptops and iPads are available for use throughout the school day as part of computing lessons and for cross-curricular use.
- The school has a computing technician who is in school once a week.
- There is a link governor for Computing who meets with the Computing Subject Lead.

Evidence of learning

The children's online work is saved on their Google Drive. Each child also has a folder to store their Computing learning over the year.

Impact

Computing at William Fletcher is monitored through both formative and summative assessment opportunities. Each lesson includes guidance to support teachers in assessing pupils against the learning objectives and each unit has a unit quiz and knowledge catcher which can be used at the start and/or end of the unit.

After the implementation of our Computing scheme, pupils should leave William Fletcher equipped with a range of skills to enable them to succeed in their secondary education and be active participants in the ever-increasing digital world.

The expected impact is that children will:

-Be critical thinkers and able to understand how to make informed and appropriate digital choices in the future.

-Understand the importance that computing will have going forward in both their educational and working life and in their social and personal futures.

-Understand how to balance time spent on technology and time spent away from it in a healthy and appropriate manner.

-Understand that technology helps to showcase their ideas and creativity. They will know that different types of software and hardware can help them achieve a broad variety of artistic and practical aims.

-Show a clear progression of technical skills across all areas of the National Curriculum- computer science, information technology and digital literacy.

-Be able to use technology both individually and as a part of a collaborative team.

-Be aware of online safety issues and protocols and be able to deal with any problems in a responsible and appropriate manner.

-Have an awareness of developments in technology and have an idea of how current technologies work and relate to one another.

-Meet the end of key stage expectations outlined in the National Curriculum for Computing.

Assessment

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term. Assessing computing is an integral part of teaching & learning and key to good practice.

Assessment in Computing is process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. As assessment is part of the learning process, it is essential that pupils are closely involved. Assessment can be broken down into;

- Formative assessments are carried out during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.
- Summative assessment should review pupils' ability and provide a best fit 'level'. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their capability throughout the term. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

We assess the children's work in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

Equal opportunities (see also Equality policy)

We will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to computing and all staff members follow the Equality policy.

Health and Safety

The school is aware of the health and safety issues involved in children's use of IT and computing.All fixed electrical appliances in school are tested by a Local Authority contractor and all portable electrical equipment in school is tested by an external contractor.

It is advised that staff should not bring their own electrical equipment in to school but, if this is necessary, equipment must be PAT tested before being used in school. This also applies to any equipment brought in to school by, for example, visitors running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop 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 a computer technician or head teacher who will arrange for repair or disposal. In addition, liquids must not be taken near the computers.

Safety guidelines are set out in the Online Safety policy and Code of Conduct policies.

Security

We take security very seriously. As such:

- the computing technician will be responsible for regularly updating anti-virus software.
- use of IT and computing will be in line with the school's Online Safety policy and Code of conduct policies.
- Parents will be made aware of the Online Safety policy and Code of conduct policies
- all pupils will be aware of the school rules for responsible use of IT and computing and the internet

Policy Name	Computing
Frequency of review	3 years
Reviewed on	October 2026
Reviewed by	Teaching team
Next review date	October 2029