



WHITEHALL PRIMARY SCHOOL

Computing Policy

Computing Intent Statement

Through teaching computing, we equip our children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. With technology playing such a significant role in society today, we believe 'Computational thinking' is a skill all children must be taught if they are to be able to participate effectively and safely in this digital world.

Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems.

Computing skills are a major factor in enabling children to be confident, creative and independent learners and it is our intention that children have every opportunity available to allow them to achieve this.

We want children to become autonomous, independent users of computing technologies, gaining confidence and enjoyment from their work. But also, enable them to embrace and utilise new technology in a socially responsible and safe way.

Not only do we aspire for them to be digitally literate and competent of technology, but through our computing lessons we want them to develop creativity, resilience and critical thinking skills.

Aims and Objectives

At Whitehall Primary School our aims are that:

- Computing be presented as a creative and fascinating process in which children are encouraged to use their own initiative, imagination, reasoning and investigative skills.
- Children appreciate the relevance of ICT in our society and that they see it as an essential tool for learning, communication, finding information and for controlling and understanding their environment.
- Opportunities are provided for children, staff and parents to explore the potential of ICT giving them an understanding of the effects and limitations of ICT as well as the new opportunities it provides.
- Children receive equal opportunity to develop their Computing capability, with the use of Computing being planned for and embedded into all other subject areas.
- Differentiation is planned for in each area of the Computing curriculum so that children achieve to the best of their ability.
- Children learn to work individually and collaboratively.
- Children have a heightened interest and awareness of ICT through the regular display of their ICT enhanced work in the classrooms and

around the school, and the positive attitude of staff towards the use of ICT.

- Computing is used to raise standards in Maths, English and Science as well as the Foundation subjects.
- The health and safety of the pupils of Whitehall is ensured with regard to using ICT responsibly when having access to the wider world.
- ICT is used to support effective whole school management.

Implementation

Lessons are taught by the Computing Instructor and the class teacher together. As the aims of the Computing curriculum are to equip pupils 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 individuals or pairs of children to use computers to help them with whatever they are trying to study.

We recognise that all classes have children with widely differing ICT abilities. This is especially true when some children have access to ICT 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 tasks);
- Grouping children by ability 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 Curriculum Planning

The Early Years Foundation Stage

This policy acknowledges the requirements for promoting the learning and development of children set out in the Early Years Foundation Stage (EYFS) statutory framework 2021. Computing in the Foundation Stage is taught

alongside the learning of the topic work covered during the year. The technology strand for computing was removed for Reception and Nursery- they focus on the Early Learning Goals. Computing is not just about computers. The Early Years environment feature ICT scenarios based on experience in the real world, such as role play, including outdoor play. Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as metal detectors, walkie-talkie sets, cameras, etc. Recording devices can support children who have English as an additional language and SEND difficulties.

Key Stage 1 and Key Stage 2 follow the National Curriculum 2014 Computing Programmes of Study. Lessons are planned using the iLearn2 Computing Scheme.

Computing is taught as a discrete subject but learning also takes place within the context of teaching the other Core and Foundation subjects.

Our long term Computing plan uses the progression of skills document, which shows how teaching units are distributed across the year groups, and how these fit together to ensure skills are progressive and sequential within the curriculum plan.

The medium term plans identify the key learning Intentions, skills and knowledge and outcomes for each unit. They are broken down into steps which are taught weekly.

The class teacher keeps the medium term plans on SharePoint and annotates them on a weekly basis. The Computing Curriculum Leader will review sample plans at the end of each term.

The topics studied in Computing are planned to build upon prior learning. While we offer opportunities for pupils of all abilities to develop their skills and knowledge in each unit, we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move up through the school.

Computing is divided into three main areas or strands:

1. Digital Literacy –

- Using technology safely and responsibly
- Understanding opportunities technology offers for communication and collaboration
- Evaluating digital content

2. Computer Science –

- Understanding how computers and computer systems work
- Developing computational thinking
- Programming

3. Information Technology –

- Having the skills to create, manipulate, store and retrieve digital content
- Selecting the right software to accomplish given goals

By the end of Key Stage 1 pupils will 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 and presenting data and information.

A knowledge organiser has been designed for each unit from Years 1-6, which is used as a learning aid and is referred to throughout each lesson. Time is given to revise from knowledge organisers from past terms and years for the benefit of repetition. It is also used to help children reflect upon and to check for understanding, as well as embed the knowledge and skills into long term memory.

Cross Curricular Links

The nature of ICT as a tool means that there will be many opportunities for links with other subjects. Teachers will plan some activities which emphasise the development of ICT capability and others which support the subject being taught.

Equal Opportunities

We will ensure that all children are provided with the same learning opportunities whatever their social class, gender, culture, race, or ability. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to ICT and computing and all staff members follow the equal opportunities policy. Where necessary, adaptations in the delivery are made to ensure all children have access to the curriculum.

Children with Special Educational Needs and Disabilities

At Whitehall School we teach Computing to all children, whatever their ability. It forms part of our school Teaching and Learning policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties as well as providing extension activities for the more able and gifted. In some instances, the use of ICT has a considerable impact on the quality of work that children produce; it increases their confidence and motivation. Where appropriate the use of ICT equipment may be provided to support the physical needs of pupils for example those with visual/hearing impairments or dyslexia. Coloured keyboards and mice are provided in the hub for this purpose.

Impact

Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are taken from the National Curriculum to assess key computing skills each term. Assessing ICT and computing work is an integral part of teaching and learning and central to good practice. 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 focussed tasks and activities. Plans are annotated. They provide pupils and teachers the opportunity to reflect on their learning in the context of the agreed outcomes. This feeds into the planning for the next lesson or activity.
- **Summative** assessments review the pupil's capability and provide a best fit. Use of independent open-ended tasks provide opportunities for pupils to demonstrate capability in relation to the unit of work. There

may be opportunity for pupils to review and identify next steps. Summative assessments are recorded for all pupils showing whether they are working towards, within or working above the learning objectives.

Computer work is saved on the school network with the children having their own work folders. The children now also have Computing books where their Learning Intentions, any assessments and skills grids are stored.

Monitoring and Evaluation

The Computing Curriculum Leader will monitor and evaluate the plans regularly at the end of every term.

Learning walks, lesson drop ins and pupil interviews will be undertaken by the Computing Curriculum Leader where possible.

Samples of children work will be kept in an e-portfolio on the school network or paper copies kept in a portfolio folder if appropriate. This demonstrates the expected level of achievement in Computing for each age group in the school. The everyday use of ICT is developing rapidly, with new technology being produced all the time. This policy therefore will be reviewed and revised on a regular basis. The Computing Curriculum Leader will liaise regularly with staff, both at staff meetings and informally, to monitor the effectiveness of the policy and units of work. Meetings with subject co-ordinators will also ensure that the use of ICT across the curriculum is planned for and evaluated.

Teachers are responsible for ensuring that our curriculum values are embedded throughout Computing lessons, by providing enriched opportunities. The Curriculum ensures that academic success, creativity, problem-solving, responsibility and resilience as well as the well-being and mental health are key elements that support the development of the whole child and promote a positive attitude to learning. Examples of opportunities can be found in the Teaching, Learning and Assessment Policy.

Resources

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

The Computing Hub

The Computing Hub has 20 desktop computers and 12 Laptops. Each machine has Internet access. The Computing Hub is also equipped with a colour laser printer, a scanner and a 3D Printer. 32 iPads are also available to use in the Hub or in classrooms.

Main School

Each class has a main teaching computer work station and an interactive Smartboard. Each class also has a visualiser. Some classrooms have an

extra computer for children to use. Staff have their own iPads to be used in school. A laptop is being provided to each classroom for SEND purposes-Sept22.

In addition to this, there is a variety of other ICT equipment in school including: Roamers, Beebots, CD player, radios, video cameras, headphones, sensors and detectors. A variety of software is available for all machines.

To ensure that copyright laws are adhered to, staff, pupils and parents are not permitted to run software brought in from outside school on school machines.

An audit of resources is undertaken by the Network Manager on a yearly basis to ensure that hardware and software are kept as up to date as possible and that obsolete or broken machines are scrapped or repaired.

Health and Safety (also see Health and Safety Policy)

The school is aware of the health and safety issues involved in children's use of ICT and computing.

- All fixed and portable electrical appliances in school are tested by a LA contractor every year.
- Damaged equipment should be reported to the Network Manager who will arrange for repair or disposal.
- Children should not put plugs into sockets or switch the sockets on.
- Staff should ensure that the children are seated at the computers comfortably and be aware of the dangers of continuous use (e.g. eye/wrist strain etc.)
- Trailing leads should be made safe behind equipment.
- Food and drink should not be consumed near ICT equipment.
- It is the responsibility of staff to ensure that classroom ICT equipment is stored securely, cleaned regularly and that their class or themselves leave the Computing Hub clean and tidy after use.
- Online-safety forms an integral part of the curriculum and the school will deliver further education through assemblies biennially and parents presentations

An Online-Safety Policy has been written in order to allow the safe and efficient use of the Internet for both staff and pupils in an educational context. An adult should always supervise children when they are accessing information via the Internet. The service provider (RM) does filter information but staff are ultimately responsible for information accessed by pupils. Any breach in safety must be reported to the Senior Safeguarding Lead (DSL).

Security

- The ICT Network Manager will be responsible for regularly updating the anti-virus software.
- Use of ICT and computing will be in line with the school's Acceptable Use Policy. All staff and children must sign a copy of the schools AUP.

- Parents will be made aware of the AUP at school entry.
- All pupils will be aware of the school rules for responsible use on login to the network and will understand the consequence of misuse.
- The agreed rules for safe and responsible use of ICT and computing and the internet will be displayed in all ICT and computing areas.

Links to School Development Plan

The Computing Curriculum Leader will work with the School Leadership Team to ensure implementation of the school's Computing Policy and School Development Plan.

The Computing Curriculum Leader will produce an action plan each year outlining the targets for that year.

Staff training needs will be met by:

- Auditing staff skills and confidence in the use of ICT regularly
- Arranging training for individuals as required
- The Computing Curriculum Leader and the ICT Network Manager attending courses and support and train staff as far as possible
- The ICT Network Manager is available to offer support.

Link Governor

The named link governor is responsible for:

- Monitoring the impact of the subject across the school and on pupils
- Monitoring teacher workload and professional development
- Ensuring subject action plans are suitable
- Monitoring the quality of resources
- Keeping a track of pupil and parent engagement with the subject
- Keeping up to date with the curriculum (what's taught, why it's taught, and how it's taught)

Links With Other Policies

This policy links to the following policies and procedures:

- Online Safety Policy

- Teaching, Learning and Assessment Policy
- Curriculum Policy
- Marking and Feedback Policy

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Approved by Governors on:

Next Review Date: March 2024