WHITCHURCH COMBINED SCHOOL

COMPUTING POLICY

Introduction

This policy sets out Whitchurch Combined School's Intent, Implementation and Impact for the successful delivery of Computing. This policy should be read in conjunction with other relevant school policies such as the Safeguarding, Equal Opportunities, Curriculum, Finance, Teaching & Learning, SEND and Assessment policies. The policy has been developed by the Computing Leader (Mrs Fowler) in consultation with the SENCO, Leadership Team and teachers. Guidance from consultants and pupil, parent and staff voice questionnaires have shaped and will continue to help shape this policy. This policy is based on government recommended/statutory programmes of study. Due to the fast pace of technology innovation and constantly emerging trends, it is recommended that this policy be reviewed, at minimum, at the start of every academic cycle.

Whitchurch Combined School believes that every child should have the right to a curriculum that champions excellence; supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school. We believe that technology can provide: enhanced collaborative learning opportunities; better engagement of pupils; easier access to rich content; support conceptual understanding of new concepts and can support the needs of all our pupils.

Intent

The overall aim of Computing at Whitchurch Combined School is that pupils leave primary school as confident, capable and creative users of digital technology, with a secure understanding of the fundamental principles of computer science and as safe, responsible and discerning digital citizens.

We use the 'Switched On' Computing scheme to deliver our Curriculum. The 'Switched On' Computing Scheme starts from the national curriculum programmes of study for Key Stages 1 and 2. As with the national curriculum, the scheme aims to develop pupils' computational thinking and creativity so that they can 'understand and change the

world’. The scheme recognises that computing has three inter-related aspects, and these are covered in each year:

- Computer Science (the foundations of computing, covering coding and computational thinking)
- Information Technology (the applications of computing, including working with documents, data and digital media)
- Digital Literacy (the implications of computing for individuals and society)

Switched on Computing also recognises the ‘spiral’ nature of progression within computing: new knowledge, skills and understanding within each of the strands of the subject build on what’s gone before. Thus, for example, in programming pupils are introduced to a simple sequence of recorded button presses on a Bee Bot in Year 1, then move on to building programs by snapping together blocks to move sprites in Scratch Jr before going on to create their own animations, quizzes and games in Scratch. Pupils progress from simpler to more complex programming languages, but also build up their conceptual understanding of programming from sequence, through repetition and selection to variables, input and output.

Implementation

One of the great strengths of Switched On Computing is the flexibility it allows our School for implementation. It is designed for our school to adapt the scheme to our own technologies, approaches and priorities. Units typically include some cross-curricular connections to things pupils will be studying elsewhere in the curriculum, helping them to see how computing can be applied in a wide range of contexts, but also doing much to promote retention in both domains as pupils make and reinforce the connections between new ideas.

Switched On Computing recognises that computing is, at its heart, a practical and creative subject, with pupils learning best when they’re consciously engaged in digital artefacts to share with others. These can be as simple as digital images or musical compositions through to complex collaborative projects and sophisticated, well-tested programs of their own. Throughout the scheme, pupils develop skills in working with others, including contributing to and leading shared group work. They become adept at giving constructive, critical feedback, and on acting on feedback they receive from their peers.

Computer Science

In computer science, pupils learn to program first with Blue-Bots, then ScratchJr, then Scratch and the micro:bit. This takes pupils from a physical manipulative in Key Stage 1, through a pictorial representation of code with ScratchJr to a virtual, on screen, manipulative in which text-based programming is made more accessible through a block-based language. It also ensures progression through key programming constructs, with pupils introduced to sequence with the Blue-Bot, repetition in ScratchJr, and selection and variables with Scratch and Make Code for the micro:bit. They develop their computational thinking: the ability to apply programming skills to solve real world problems systematically.

Information technology

Pupils acquire skills in using core 'office' applications to work with text, multimedia presentations and data analysis, as well as a competency with digital media from photography and audio to video, animation and virtual reality. The programme of study for computing at Key Stage 1 requires that pupils be taught to 'use technology purposefully to create, organise, store, manipulate and retrieve digital content', and Switched On Computing ensures that they can do this using text, images, sound and video. Building on this at Key Stage 2, Switched On Computing helps them to 'select, use and combine' a variety of software on a range of devices. They work with both numerical data and information across a range of formats including those that combine both words and images.

Digital literacy

Pupils develop an understanding of how the Internet, the World Wide Web and search engines work, as well as learning how to use these and other technologies safely and responsibly.

Creativity

Switched On Computing emphasises computing as a creative subject. Many units involve pupils in making digital artefacts, ranging from programs and presentations to virtual models and movies.

Collaboration

Units also provide ample opportunity for pupils to learn together: in many units they work in pairs or small groups, and even when working individually there is opportunity built-in for them to give and receive feedback to others. Pupils become increasingly discerning in evaluating online content and their own and others' work.

Thinking skills

The scheme encourages pupils to think about digital technology: computational thinking concepts such as logic, algorithms, decomposition and abstraction are emphasised throughout. Pupils are regularly asked to consider the broader moral and ethical issues raised by the technologies they study.

Impact

Switched On Computing offers many ways to track the impact of computing lessons on pupils' learning. Each unit includes a comprehensive list of differentiated learning outcomes, making it easy for teachers to check where pupils' work fits with a set of age-related expectations. Using cloud-based tools such as Office 365 and Google Apps for Education, it's easier than ever for pupils to build up a portfolio of their creative work, demonstrating how their skills and their thinking have developed over their years at the school.

Assessment

Pupil attainment is assessed using the Switched On Computing Assessment Framework Tool for Years 1 to 6. The tool enables staff to accurately identify attainment of pupils through the detailed exemplification it has for each key learning intention. Sonar Tracker will also be used to give a termly judgement on whether children are working at, above or below Age Related Expectation (ARE).

Monitoring, Evaluation and Feedback

Monitoring standards of teaching and learning within Computing is the primary responsibility of the Computing Leader. All teachers keep a floor book of the activities created with children. There will also be saved work in Google Classroom and with in Switched On Computing. The Floor book must contain work samples from all areas of the curriculum taught for the year group. Details of monitoring and evaluation schedules can be found in the Computing Action Plan and School Monitoring Schedule.

- Monitoring will be achieved through:
- Floor Book scrutiny.
- Learning walks.
- Observations.
- Pupil voice.
- Teacher voice.
- Reflective teacher feedback.

- Learning environment monitoring.
- Dedicated Computing Leader and Assessment Leader time.

Evaluation and Feedback will be achieved through:

- Dedicated Computing Leader and Assessment Leader time.
- Using recognised standards documentation for end-of-year expectations.
- Using recognised national standards for benchmarking Computing provision in primary schools.
- Written feedback on evaluation of monitoring activities to be provided by the Computing Leader in a timely manner.
- Feedback on whole school areas of development in regard to Computing to be fed back through insets/AOB/staff meetings.

Early Years

We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe the following:

- Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in role play.
- Pupils gain confidence, control and language skills through opportunities to 'paint' on the interactive board/devices or control remotely operated toys.
- Outdoor exploration is an important aspect, supported by ICT devices, such as iPads to take pictures.
- Throughout role play set up, devices are used to simulate ICT in the real world.
- Recording devices can support children to develop their communication skills.
- This is especially useful for children who have English as an additional language.

Key Stage 1 Outcomes

Pupil 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.

Key Stage 2 Outcomes

Pupil should be 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 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.

Safeguarding: Online Safety

Online safety has a high profile at Whitchurch Combined School for all stakeholders. We ensure this profile is maintained and that pupil needs are met by the following:

- A relevant up-to-date online safety curriculum which is progressive from Early Years to the end of Year 6.
- A curriculum that is threaded throughout other curriculums and embedded in the day-to-day lives of our pupils.
- Training for staff and governors which is relevant to their needs and ultimately positively impacts on the pupils.
- Scheduled pupil voice sessions and learning walks 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. They know who to contact at school if they have concerns.
- Pupils, staff and parents have Acceptable Use Policies which are signed and copies freely available.
- Our online safety policy clearly states how monitoring of online safety is undertaken and any incidents/infringements to it are dealt with.
- Filtering and monitoring systems for all our online access.
- Data policies which stipulate how we keep confidential information secure.

Resources

- All resources are procured with the underlining considerations of value: The extent at which the resource impacts on learning and the material cost of this. Protocol details for procurement can be found in the school finance policy.
- A range of resources is available which successfully supports delivering the Computing curriculum and enables all learners to reach their full potential.
- Resources are suitably maintained and replenished when needed, which is overseen by the Computing Leader.
- An itemised list of all resources is shared with staff and kept up to date by the Computing Leader.
- Audits of school resources are conducted regularly by the Computing Leader, which informs bidding for budgets allocations.
- The Computing Leader keeps up to date with the latest technology resources and will make informed decisions about possible procurement of them through their own research.
- Suggestions for getting the very best out of the resources are made available to teaching and support staff by the Computing Lead.
- The Computing Action Plan details foreseen future resource procurement which is shared with senior leaders before the budget setting period.

Inclusion

At Whitchurch Combined School, we aim to enable all children to achieve to their full potential. This includes children of all abilities, social and cultural backgrounds, those with disabilities, EAL speakers, children with SEN Support and children with an EHCP. We place particular emphasis on the flexibility technology brings to allowing pupils to access learning opportunities, particularly pupils with SEN and disabilities. With this in

mind, we will ensure additional access to technology is provided throughout the school day and in some cases beyond the school day.

Roles and Responsibilities

Due to technology extending beyond the National Curriculum for Computing, there are key roles and responsibilities specific members of staff have.

Head Teacher:

- Monitoring the implementation of the Computing Policy and its associated policies such as the Safeguarding and SEND Policies.
- Ratifying (in conjunction with the Governing Body) the Computing policy, Safeguarding policy and Computing Leader's Action Plan.
- Securing technical support service contracts and infrastructure maintenance contracts.
- Approving CPD and training which is in line with the whole school's strategic plan.
- Approving budget bids and setting them.
- Creating in conjunction with the Computing Leader, a long-term vision for Computing which includes forecasted expenditure and resources.
- Monitoring the performance of the Computing Leader in respect to their specific job role description for Computing.
- Ensuring any government legislation is being met.

Computing Lead

- Raising the profile of Computing for all stakeholders.
- Monitoring the standards of Computing and feeding back to staff in a timely fashion so they can act on areas for development.
- Ensuring assessment systems are in place for Computing.
- Maintaining overall consistency in standards of Computing across the school.
- Reporting on Computing at specific times of the year to the Governing Body/Head/Staff.
- Auditing the needs of the staff in terms of training/CPD.
- Actively supporting staff with their day-to-day practice.
- Seeking out opportunities to inspire staff in developing their practice through modelling and sharing new ideas, approaches and initiatives.
- Attending training and keeping abreast with the latest educational technology initiatives.
- Using nationally recognised standards to benchmark Computing.

- Creating bids for the annual budgets and monitoring budget spend.
- Keeping an up-to-date log of all resources available to staff.
- Creating Action Plans for Computing and supporting a long-term vision which feeds into the whole school development plan.
- Procuring physical and online resources that demonstrate best value.
- Reviewing the Computing curriculum and developing it as needed.
- Overseeing the effectiveness of the technician.
- Working as needed with the SENCO/Head Teacher to ensure online safety provision is above adequate and all legislation is in place.

IT manager (David King - itech support)

- Conducts routine scheduled maintenance/updates on systems.
- Supports the administration and set-up of online services including the school website.
- Fixes errors/issues with hardware and software set-up, prioritising as needed.
- Routinely checks school 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 associated projected costs.

Health and Safety

Whitchurch Combined School 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 including how to power off and on. Pupils are reminded about the dangers of electricity and the danger signs to look out for. Adequate displays and warning signs are strategically placed around the school to reinforce health and safety.

M Soar: September 2023

Review: September 2024