Walbottle Village Primary School

Computing Policy

October 2021

School Vision

Our vision for Valour Academy is that all children will feel loved, happy and safe.

We will provide each child with many and varied opportunities to develop their character to feel accepted; to develop a sense of belonging; to be driven and resilient and to be inspired and be inspiring.

This document is a statement of the aims and principles for the teaching and learning of Computing at Walbottle Village Primary School.

Rationale

At Walbottle Village Primary, the teaching and learning of Computing will incorporate the objectives of the National Curriculum. In addition to this, teachers will provide learning opportunities from other areas of computing which teach the new children new skills, stretch their abilities and consolidate their knowledge. Children will learn to design and create content for others. The school will deliver a Computing curriculum which does not only use PCs and tablets, but also includes lessons on the theory and principles of computer science and computational thinking. Through puzzles and challenges the children will gain an insight into how computers work and how we program them. Children will learn that it is a positive learning experience to experiment, find difficulties, and to then overcome such problems by refining their designs or programs. Finally, we wish to give the children in the school the ethos that Computing is a fun, creative, investigative subject, not one based on a series of administrative tasks.

Aims and Objectives

Through a rich and stimulating learning environment the teaching of Computing aims to ensure that children:

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

*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.

Curriculum Organisation

The new National Curriculum's Computing programme of study is divided between Key Stage 1 and Key Stage 2.

During the Foundation Stage

The EYFS is based around four Themes. Each Theme is linked to an important Principle:

A Unique Child - Every child is a competent learner from birth who can be resilient, capable, confident and self-assured.

Positive Relationships - Children learn to be strong and independent from a base of loving and secure relationships with parents and/or a key person.

Enabling Environments - The environment plays a key role in supporting and extending children's development and learning.

Learning and Development - Children develop and learn in different ways and at different rates and all areas of Learning and Development are equally important and inter-connected.

Each Principle is supported by four Commitments. The Commitments describe how the Principles can be put into practice.

EYFS teachers can access advice on planning and resources for their children at the following website: http://ictearlyyears.e2bn.org/planning.html

During KS1 and KS2

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 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
* use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about material on the internet
* recognise common uses of information technology beyond school.

Key stage 2

Pupils 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

* use technology safely, respectfully and responsibly; know a range of ways to report concerns and inappropriate behaviour

* 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.

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The children should be given opportunities as part of their work in the classroom to:

- Use Computational thinking
- Use the language of Computing
- Learn the principles of Computer Science
- Be creative with technology
- Experiment, find problems and correct them.
- Save, print and display their work
- Explain their thinking and the processes they have used.

The Role of the Computing Co-ordinator

The role of the co-ordinator is largely to ensure that a broad Computing curriculum is being delivered in a way which meets the learning objectives and inspires and motivates the children.

These responsibilities will include:

* Prudent management of the Computing budget.

* Report to the Governors, Executive Headteacher, Head of School and Phase Leader on developments in Computing in the subject.

* Attend relevant training, conferences and network meetings.

* Liaise with the school's technician about developments and difficulties, in particular those risen by members of staff who are unable to find solutions themselves.

* To read newspaper and internet news reports about Computing developments in school and take on board any advice given within.

* To plan, write and keep under review policy documents/guidelines which will incorporate the requirements of the National Curriculum, such as the school Computing curriculum, written in January 2013.

* To volunteer to hold staff training sessions to help others bring their skills up to date.

* To evaluate continuity, breadth, achievement and progression across the whole school by monitoring the teachers' long-term planning and pupils' work to ensure that appropriate learning outcomes and activities are planned.

* To observe lessons and train, guide and assist teachers in the planning and delivery of computing.

* To maintain and develop the school website, in particular ensuring statutory information is included.

* To book visits outside of school and invite visitors to the school to enhance children's learning opportunities.

Record Keeping and Assessment

Computing based activities and experiences within the **Foundation Stage** will be observed and encouraged through provision. Any work samples, observations and photographs form the basis of these assessments.

In **KS1** and **KS2**, pupil progress is monitored through their progression within coding, a computerized system used to develop understanding of computer science. Assessment sheets are updated each term by class teachers in order to monitor understanding and progression within the computing curriculum. Each class has a computing file, where worksheets and evidence is provided. Additionally, all pupils have a folder on our pupil drive to save work completed on computers.

Computing evidence files allow teachers to gather photographic, written and project evidence of children's achievements from each computing session. Moreover, this can be found on the pupil drive. Evidence will support objectives taught and inform future planning.

A long term plan for KS1 and KS2 is on the T-drive, containing units which link to the National Curriculum. This is then referred to when completing termly subject monitoring.

A selection of work from previous years is saved on the school's T-drive to show progress and to inform teachers of their children's work in earlier classes.

Parents are informed of their child's progress in the end of year academic reports. Formative assessments can determine what each child has learned and what therefore should be the next stage in their learning. Formative assessment is mostly carried out informally by teachers in the course of their teaching.

Equal Opportunities

We believe that all children, irrespective of background, race, gender and capability should have equal access to the curriculum as stated in each curriculum policy. Our school practice should provide opportunities which reflect the cultural diversity of our school, community and locality. Through the teaching of Computing we will promote mutual respect for all cultures by emphasising the importance of safe, polite conduct online, particularly when using social media.

Safeguarding

As part of our curriculum, children are taught the importance of safe conduct online, such as not disclosing personal information to strangers online. This is presented in a computing unit as well as during assemblies and in cross-curricular subjects such as PSHE. E-safety information about keeping children safe online is also provided for parents every year when celebrating 'Safer Internet Day.' During this day, children complete a range of reading and response activities around an age appropriate, specific topic linked to online safety.

Under the Prevent Duty, we all have a professional, moral and legal duty to safeguard our children from the potential risks of radicalisation.

We will do this through:

- Filtering systems on all hardware - these will be checked regularly by staff members or trustees. Any concerns will be reported to our local authority IT team
- Delivering sessions in school around e safety
- Providing a broad and balanced curriculum that focuses on and explores controversial issues (for example through history, geography, PSHE, RSE and the teaching of British Values)
- Sharing resources around Prevent with families

SEN

At Walbottle Village Primary School we teach Computing to all children, whatever their ability. Computing forms part of the school curriculum policy to provide a broad

and balanced education to all children. Walbottle Village Primary School recognises the need to cater for children with special educational needs. Work is differentiated to assist children's learning in terms of:

- learning outcomes
- tasks
- teaching methods
- resources

Tasks can be broken down into small steps, giving children achievable goals. Activities should reinforce children's understanding of the subject. Computing may need to be suitably differentiated on occasions according to the child's special educational needs. The more able children should be given open-ended tasks and opportunities for further research and more challenging activities.

More Able

'More Able', formerly 'Gifted and Talented' children are identified through pupil tracking grids. They are provided with opportunities to promote and develop their learning further. Provision for these children should be detailed on teacher's Computing planning, just as it is for SEN children.

Social Cohesion

Where appropriate links are made in Computing to help children learn about and understand the local, regional, national and international community in which they live.

Health and Safety

Health and safety is of the upmost importance in classrooms where digital equipment is being used. Our PCs and tablets are checked regally by technicians to ensure they are safe to use by all individuals. Laptops are housed in a lock-up cabinet when not in use where they can be charged safely. Tablets are stored in two large locked cases when not in use to ensure charging takes place safely. Children are not allowed to get their own equipment out without an adult or eat or drink near digital equipment. Additionally, when in use, children are reminded not to attempt to walk with their head phones on.

Every Child Matters

[Change for Children](#) brings together all the ways we are working towards improved outcomes for children, young people and families. There has been much research into a child's well-being in childhood and later life and it was discovered that the 5 outcomes are being healthy, staying safe, enjoying and achieving, making a positive contribution and achieving economic well-being.

Culture, sport and play activities provide "things to do, places to go" for children and young people, but they also have an important role to play in delivering the Change for Children programme by contributing to the achievement of the five outcomes, all of which can be studied through Computing.

Pupil performance and well-being go hand in hand. Pupils can't learn if they don't feel safe or if health problems are allowed to create barriers. Doing well in education is the most effective route for young people out of poverty and disaffection.

Cross-Curricular Links

The new National Curriculum calls for:

A high-quality computing education equips pupils to understand and change the world through logical thinking and creativity, including making links with mathematics, science, and design and technology.

Computing is taught separately and jointly with other subjects. Our Computing planning emphasises links with other subjects across the curriculum whether it be writing and carrying out instructions or creating a project on a current topic they are learning about.

Resources

We are continually reviewing resources in our school to be able to teach Computing efficiently and in a way which is linked to children's interests. Staff are informed of new resources and are encouraged to share resources and good practice across the school and OWL Trust.

Visits

Children will have opportunities to visit the City Learning Centre as part of their Computing curriculum to experience different resources and new learning opportunities. Outside visitors from GEM Education also visit our school to work with children on Computing projects.

<u>Web Security</u>

Once a month, a school governor will check our web security fire wall with the LA IT Technician.

October 2021