Computing Policy

DEFINITION

Computing helps us to understand how technology works, and how it is designed and programmed. Computing helps us to identify and debug problems. Through computing, we become confident and responsible users of technology, ready for life in a digital world.

Date produced – April 2022

Purpose of Study
At Welholme Academy. we believe that it is vital for all our pupils to learn from and about Computing and Technology, so that they can understand the world around them. Through teaching our computing curriculum, we aim to equip our children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. It is our intention to enable children to find, explore, analyse, exchange and present information as well as having the skills to manipulate, develop and interpret different forms of technology in an ever-changing world.

In such a fast-moving curriculum, we are constantly looking at new ways of delivering relevant and exciting activities, while still delivering the fundamental skills needed for computing. Using technology safely and responsibly is a main priority and ensuring all pupils are able to use the internet and equipment appropriately is of paramount importance. We encourage our pupils to make links across the curriculum, the world and our local community, to reflect on their own experiences, which are designed in our curriculum, allowing horizontal and vertical links with previous year groups.

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.

Our ambitious computing curriculum is now structured in 3 areas that allow all pupils from EY to year 6 to progress through different categories of knowledge. These are: Digital Literacy, Information Technology and Computer Science.

Each area of the curriculum gives pupils time to practice and rehearse the knowledge needed to be proficient at computing and be ready for the next age of learning.

The curriculum for computing aims to ensure that all pupils:

- 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.

Implementation

Organisation
A theme based approach to learning is promoted at Welholme. The whole school follow the same overarching theme each half term. For each theme, each year group has their own focus which links in to the overarching theme. Year groups use their theme work to answer an enquiry question.   Each theme has a foundation subject focus which changes each half term. Our computing curriculum offers a progressive scheme of work for EYFS, Key Stage 1 and Key Stage 2 which matches the expectations of the National Curriculum. The curriculum looks at the

progression needed for all pupils to develop and embed skills and knowledge within the strands of: Computer Science, Information Technology and Digital Literacy. Computing is taught both discretely and across the wider curriculum, supporting other areas of learning across the school. Our pupils take part in weekly computing lessons within our computing suite and have continuous use of IPads and various other technology. In EYFS computing work is recorded in a whole class theme book. In KS1 and KS2, work is recorded in individual theme books or saved onto children's accounts. As well as written evidence, Children will have the opportunity to explore, respond and discuss key issues such as digital communication, cyber-bullying, online safety, security and social media.

Resources
At Welholme Academy we understand the importance of first-hand experiences for our children and visits are encouraged where possible.

SEND
All children at Welholme Academy will access quality first teaching in computing and are taught age appropriate objectives which are set out in the subject overview document. To enable all children to achieve their potential in computing, scaffolding and support is used appropriately.

All children at Welholme Academy have access to quality first teaching in all areas of the curriculum which enables them to take part in a broad and balanced curriculum.

Teachers have high expectations of all children. Inclusive and high-quality teaching is delivered to the whole class in computing with bespoke support and interventions carefully planned for groups or individuals where needed.

In order to develop knowledge and skills in computing some children may need extra intervention or provision. Interventions, additional support, resources and scaffolds are put in place to ensure the children reach their goals and learn in the best possible environment and any barriers to computing are minimised.

Support in computing can be in the form of one to one or small group but the needs of the child and how they learn best are always considered first and foremost. Working closely with peers in mixed ability groups enables the children to work inclusively and to support each other. Each class has two Digital Leaders to offer help and support to their peers. Parallel to this we believe firmly that a child should develop independence skills in computing as soon as possible. Opportunities are provided to enable this and any support given to a child / children will be short term and reviewed regularly.

Impact

The impact this curriculum will have shows that:

- Children will be confident users of technology, able to use it to accomplish a wide variety of goals, both in school and at home.
- Children will have a secure and comprehensive knowledge of the implications of technology and digital systems which is important in our ever-evolving society.
- Children will be able to apply the British Values of democracy, tolerance, mutual respect, rule of law and liberty when using digital systems.
- Solve 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.

Assessment

Formative assessment is carried out constantly, within lessons, through questioning and discussion to check children's understanding. Marking in theme books links to basic skills to promote a high standard of spelling, punctuation and grammar across the curriculum. Marking also links to factual knowledge such as correct use terminology. Proof of Progress quizzes are used in theme lessons to help children retain knowledge. This also enables children to assess their own learning and identify targets for their future work. In turn this supports teachers in providing feedback for children's work.

Summative assessment is carried out yearly to indicate if a child is working towards, at or above age-related expectations. Children are assessed against the relevant National Curriculum statements for computing which are listed in the subject overview document.

Safeguarding & Child Protection

Miss Glasby is the Designated Lead teacher with responsibility for Safeguarding, Child Protection and Looked After Children. Mr Chamberlain is the Deputy. If anyone has any concerns about the care or welfare of a child, they should refer to Welholme Academy's Child Protection Policy on our school website www.welholmeacademy.com or speak to one of the Pastoral Team.

Equalities

At Welholme Academy we value all children and adults equally. The ethos of our school supports the development of self-respect and self-esteem in all children, staff and the community it serves. School and Trust staff are committed to running an equitable and inclusive school in which every individual matters, irrespective of ability, age, beliefs, culture, disability, ethnicity, gender, health, language, race, religion, sexual orientation and social circumstances.

Monitoring and Evaluation

Computing is monitored using an annual cycle of planning, teaching and book scrutiny. Following this, feedback is given to all teachers so that good practise can be shared across school. Questions are posed to highlight areas for development and if necessary changes to practise are made. This is constantly reviewed in lessons and future enquiries. Any findings and suggestions are shared with the Senior Leadership Team with the aim of improving teaching and learning in computing throughout the school, and the computing Subject lead will work in conjunction with year groups to ensure areas for development are highlighted and acted upon.

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