Exploring together
Succeeding together

Computing Policy

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Intent

At Hill Avenue Academy our aim is to educate all children to the highest levels of academic and personal achievement developing confident, happy and compassionate members of society through our bespoke, high quality Computing curriculum which is built upon, Exploring together; Succeeding together, in conjunction with our school values: Happiness, Respect, Teamwork, Achieve.

The Computing curriculum is supported and underpinned by our Learning Behaviours: Resilience, Curiosity, Collaboration, Reflection and Metacognition. They are embedded within our Computing curriculum delivery to enable and empower the children to become independent learners who are self-motivated and want to continuously learn and grow, now and in the future.

We foster curiosity by enabling children to collaboratively tinker with different types of software and hardware. Technology is an ever-advancing domain, and we aim not only to equip children with the knowledge, but the skills that they will need for the evolving world around them. We aim for children to become critical, reflective thinkers who are able to apply their knowledge using the skills that they will develop throughout the Computing curriculum. We aim for children to develop resilience as they solve problems, analyse algorithms, create code, create media and become analytical thinkers.

At Hill Avenue, we want to children to become effective users of technology who gain a deep understanding of Computing in order to harness the power of technology in their everyday lives and future vocations. Our Computing curriculum offers a coherent, progressive learning journey providing rich and challenging opportunities for the children to experience a wide range of software and hardware so they gain a deep knowledge and understanding of the use of technology. They will develop their understanding of how technology is used in the wider world and how it further enhances other areas of the curriculum.

Our Computing curriculum is designed to allow each pupil to:

- Develop their ability to apply their digital literacy capability to support their use of language and communication skills;
- Develop their digital literacy capability and understand the importance of information and how to select and prepare it;
- Develop their computational thinking – the ability to solve problems in a creative, logical and collaborative way – is developed through repeated programming opportunities and opportunities to build understanding and apply the concepts of computer science;
- Become responsible, competent, confident and creative users of information and communication technology;

- Explore their attitudes towards Computing, its value for themselves, others and society and their awareness of its advantages, risks and limitations;
- Develop skills involved in computer science, digital literacy and information technology;
- Grow an awareness of how technology is used in the wider world around them and of the benefits that it provides;
- Communicate and collaborate in order to develop understanding of the purposes for using technology and these are used to bring together home and school learning experiences;
- Become respectable users of technology and develop an understanding of how to use technology safely and the risks associated
- Solve problems by thinking critically and using their metacognitive skills.

Through exploration, children will have the opportunities to:

- Tinker with a range of software and hardware.
- Apply their computational knowledge to solve problems.
- Develop their knowledge of different types of software and how they are used to create excellent outcomes.
- Develop their understating of the role technology plays in the wider world and how this links to different professions.
- Develop their oracy skills through structured opportunities to explore and discuss.

We promote British Values through our key concepts in our Computing Curriculum. Our children explore and learn…..

- Online 'netiquette' – how to engage in the online world positively and how to debate with others, ensuring that they are respectable digital citizens.
- How to select information from valid online sources that reflect different viewpoints
- The history of Computing and how computing has had an impact on their lives today in modern Britain.
- How to conduct themselves appropriately on social media and how to leave a positive digital footprint.
- The legal implications of hackers, cyber bullying and downloading music and film from 'free' sources.

Implementation

Our Computing curriculum is taught through the three Computing domains: Computer science, digital Literacy and Information Technology. Within these three domains there are four key concepts that underpin the curriculum: Computer Systems and Networks, Programming, Creating Media and Data Handling. These four key concepts are revisited throughout each year group and progress throughout the curriculum creating a progressive spiral curriculum.

Our Computing curriculum is taught weekly in one-hour lessons through plugged (with technology) and unplugged (without technology) tasks. Key concepts, knowledge and skills are explicit within each Medium-Term Plan and have been carefully mapped out and planned to ensure progression across units of learning and as children progress through the school.

Early Years Foundation Stage (EYFS)

Children in EYFS experience imitation technology and explore its uses through play. The use of I-Pads and the interactive whiteboard are used to enhance their learning experiences during their daily provision. Children are taught responsible use of technology such as acceptable amount of daily screen time.

Key Stage One

In key Stage One, children will begin to develop an understanding of what algorithms are and how they can be implemented on digital devices. They will write their own algorithms to give set instructions to perform a specific task and learn that computers can use algorithms, to make informed and calculated predictions. For example, in year 2, children will explore unplugged activities to physically create a maze and progress to a plugged activity where they must create an algorithm to navigate an avatar through a maze. They will gain an understanding of how technology can be used to create, organise, store, manipulate and retrieve digital content such as databases. Children will also gain a wider understanding of how technology is used beyond the classroom and its uses in the world around them. They will use programs such as Scratch to debug code to develop their problem solving and logical reasoning. Throughout all this, children will learn how to be respectable digital citizens whilst using technology.

Key Stage Two

In Key Stage Two, children will continue to build upon their knowledge that they have gained throughout Key Stage One. Children will design, write and debug specific programs to achieve certain goals. They will continue to develop their problem-solving skills with more

advanced problems by breaking the components down into smaller parts. In addition, children will explore different forms of input and output and how they are used throughout technology. They will gain an understanding of how local networks work and how the world wide web operates and the advantages it offers. Children will explore a range of digital devices and software to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. For example, in year five, children will use Stop Motion Software to create their own animations. They must then edit and evaluate their evaluations and edit their animation from the information that they gather. Throughout Key Stage Two, children will continue to learn how to use technology safely, respectfully and responsibly.

At Hill Avenue we believe that all children are entitled to a broad, rich, balanced and relevant curriculum through which we support children with additional needs. We encourage all of our children to achieve their full potential and to experience a wide range of software and hardware enabling them to become competent users of technology.

When planning for teaching and learning, we take into account the wide range of abilities of our children. Teachers set high expectations for all pupils. They will use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with SEN
- Pupils with English as an additional language (EAL)

Teachers ensure that pupils with SEN and/or disabilities can study Computing and ensure that there are no barriers to every pupil achieving. Teachers plan differentiated learning opportunities to meet individual needs and put in place reasonable adjustments and scaffolds whilst ensuring access to a full and varied Computing curriculum along with their peers.

Our planning ensures there are opportunities for children of all abilities to develop their knowledge and skills in each unit and planned progression has been built so that the children are increasingly challenged as they progress within a unit and across key stages.

Assessment

Assessment steps are used by class teachers to determine children's understanding, subject knowledge and Computing skill set in relation to the National Curriculum Expectations.

High quality planning progressively builds on knowledge, skills and understanding across year groups, and key stages. Learning is assessed by teachers in lessons through

observations, questioning and in the moment marking and personalised feedback ensuring misconceptions are addressed promptly and effectively.

Children's Computing outcomes will digitally uploaded to a class file. This will include screen shots of plugged activities, links to videos and websites and pictures of unplugged activities.

Class teachers will make end of unit summary judgments about the learning of each child in relation to the National Curriculum Expectations.

Impact

Our Computing curriculum is designed to excite and develop children's interest in the use of technology, how they can successfully use technology for future learning and have a true interest in using their knowledge to continue to advance the development in the technological world. Our Computing curriculum will lead to high-quality outcomes, develop deep-rooted knowledge and ensure that children make rapid rates of progress.

The Computing subject leader will regularly monitor and review the teaching and learning of Computing through learning walks, work trawls and pupil voice. As technology is an ever advancing subject, the learning journey of Computing will be continually monitored and evaluated to review and develop the curriculum.

Our schemes of work reflect the content and challenge of the curriculum. Our aim is to offer a broad, balanced, rich and vibrant curriculum that provides challenging pathways to achievement for all learners and leads to excellent Computing provision.

Our curriculum will be exciting and will inspire children to nurture a passion for Computing. The quality of education will be evaluated to ensure that it enables children to achieve the highest standards with high quality learning outcomes and supports children in being confident, resilient, self-motivated independent learners with the skills to be a lifelong learner.

This policy also needs to be in line with other school polices and therefore should be read in conjunction with the following:

Teaching and Learning Policy

Marking and Feedback Policy

Curriculum Policy

Assessment Policy

SEND Policy

Equal Opportunities Policy

Health and Safety Policy

Review

This policy will be reviewed annually by staff and Trust Directors/CEO.