

Computing Policy

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This document is intended to inform Teachers, Governors and parents about the teaching and learning of Computing across all key stages at Bramley Park Academy.

Introduction

This document is a statement of the aims, objectives and strategies for the use of information and communication technology at Bramley Park Academy and is to sit alongside the AUP.

Due to the evolving nature of the subject, the increasing knowledge of the students and the fast pace of change within ICT, the policy will be reviewed annually. ICT has become an essential vehicle for life and life long learning, and as such BPA embraces, promotes and celebrates the use of information and communication technology skills across the curriculum and throughout the school community.

Our purpose is to have a high-quality computing education that equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. 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

Policy Statement & Aims

The school's aims are to:

- Provide a relevant, progressive and enjoyable curriculum for Computing for all pupils
- Meet the requirements of the National Curriculum programmes of study for Computing
- Use Computing as a tool to enhance learning throughout the curriculum
- To respond to new developments in technology

- To equip pupils with the confidence and capability to use ICT and computing throughout their later life
- To enhance learning in other areas of the curriculum using Computing
- To develop the understanding of how to use ICT and computing safely and responsibly

The National 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

Curriculum Planning

Our school uses the National Curriculum in England 2014 framework for Computing alongside the objectives from The Chris Quigley Essentials Curriculum for the basis of planning. Planning is progressive and begins with basic skills that are built upon in a range of contexts with increasing complexity.

Teaching will follow the three key areas of Digital Literacy (DL), Computer Science (CS) and Digital Literacy (DL).

Long term plans ensure that the three strands are covered over each key stage (EYFS, KS1, LKS2, UKS2) with planned progression built into the computing curriculum as they move through school. Computing is not a stand alone subject and children should use ICT equipment and skills across the wider curriculum via Chromebooks and Google Classroom.

Computing is taught fortnightly by individual class teachers who take responsibility for planning, resourcing and delivering the computing curriculum.

EYFS

In the Statutory Framework for EYFS technology has been removed as a stand alone early learning goal; however it is still a component of the educational programme of study. With this in mind children in the EYFS will be given the opportunity to explore a range of real life devices and they will be given explicit teaching into e-safety

Practitioners provide a rich environment in which children can build up an understanding of the world. This requires access to computers during child initiated play.

- Through role-play and discussion teachers support our youngest learners to be curious about technology in real life contexts e.g. What happens inside a washing machine? What happens when mum puts her bank card in the card reader at the supermarket? Why does she have to type a number in? Why does she keep the number a secret?
- Provide enriching experiences in the outdoor learning environment, supported by ICT toys e.g. metal detectors, controllable traffic lights and walkie-talkie sets.
- When children are developmentally secure, provide opportunities for mark making using computers and touch screen technology e.g. interactive whiteboards and tablets.
- Use age appropriate websites and stories to develop an understanding of online safety

Screen time in EYFS will be minimised to promote an active lifestyle. Screens are not to be used for passive learning and screen time is to be kept to a minimum and only used with specific learning intentions. Adverts and fast paced content will be avoided and screens will only be used with adult supervision.

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 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

Pupils will 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

Teaching and Learning

At Bramley Park Academy we make Computing an engaging and challenging learning experience. At school we believe it is important to keep up to date with the technological changes that go on in the world. Our aim is to give the children the skills that will allow them to thrive in the modern world. Our topic led curriculum allows children to engage with the National Curriculum objectives in a range of ways using a variety of tools such as Ipads, cameras and Chromebooks. Children's learning is carefully planned, ensuring that skills are taught at an appropriate age and are being built on each term and year. Children in the EYFS use IPads and Beebots to create and execute simple algorithms. This is built on in KS1 where children learn to write and debug more complex algorithms using physical devices as well as coding software. In KS2 children develop this further by using a range of software to write their own computer programmes.

We recognise that all classes have widely differing ICT abilities and experiences. 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 matching the challenge to the ability of the child; building on prior learning, knowledge and understanding.

Home learning is fostered through our Google Classroom and year webpages to provide opportunities for consolidation and further development of skills taught in the school day.

Resources

As a school we have invested in Chromebooks for each year group and for every staff member. Staff have all completed Google Level One training and facilitated the use of Google Sites and Google Classroom to enhance the learning experience for the children.

We also have a bank of Ipads for EYFS and each classroom is fitted with an interactive smartboard.

Assessment

Teacher assessment will take part in every lesson with the curriculum mapping out skills for emergent, expected and greater depth children. These are broken down into each strand to allow staff to monitor the progress of individuals. These assessments allow the teacher to clearly monitor and evaluate pupil progress on a half termly basis. Work/photographs form part of the children's topic books.

Online Safety

This policy will sit alongside the Acceptable Use Policy and our Online Safety Policy to ensure staff and pupils are both teaching and practising online safety. Whilst showing children the benefits of using new technologies we are also rigorous in teaching them about how to use technology safety and responsibly.

Use of AI

Staff are encouraged to use AI to support with resources and planning; however the programmes used need to be approved by the trust to ensure these are compliant and any information is stored securely. The trust has approved the use of Gemini, Canva, NotebookLM and Teachmate.

Equal Opportunities

We will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. All pupils have equal access to ICT and computing and all staff members follow the Accessibility policy. Resources for SEN children and able pupils will be made available to support and challenge appropriately.