

Computing Policy

Blessed John Duckett School is a Catholic School and God's love is at the centre of our community.

We experience prayer and worship together, share and recognise pupils' understanding and deepening of the Christian faith.

By working together, we strive to meet the spiritual, pastoral and academic needs of our children and community.

We demonstrate our love by caring for God's world and the diverse people in it.

We aim for respect, fairness and justice in all we do.

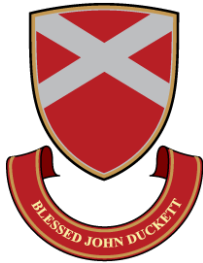
Policy agreed by Staff Summer Term 2020

Signed *Mrs S. McQuiggin* Headteacher

Agreed by Governors Summer Term 2020

Signed *Mrs E. McGurk* Chair of Governors

To be reviewed Summer Term 2022



Introduction

At Blessed John Duckett Primary School, we are committed to providing all children with learning opportunities to engage in Computing. This policy reflects our school's values and philosophy in relation to teaching and learning. It sets out a framework within which teaching and non-teaching staff can work, and gives guidance on planning, teaching and assessment. It has been developed through a process of consultation with school staff and Governors.

Rationale

We, at Blessed John Duckett RC Primary School, believe that computing makes a significant contribution to teaching and learning across all subjects and age ranges.

Our goal is to ensure pupils become independent, confident and responsible users of **computers** in order to prepare them for life in an increasingly technology rich world.

Children will be given the opportunity to understand the core of computing through the principles and concepts of computer science. They will be able to use technology to solve problems and will become analytical and logical in their thinking.

Pupils will develop the skills to be independent thinkers in which they can apply to all areas of learning. They will be able to use technology confidently and understand how to use it responsibly.

Computing lessons will provide a wide range of learning opportunities and give pupils skills that they will be able to use throughout the whole of their life, preparing them for the future workplace.

Statement of Intent

At Blessed John Duckett RC Primary School, we are committed to providing a curriculum:

- To inspire in children a curiosity and interest in technological innovations.
- To immerse them in the fascinations of technology in order to broaden aspirations and horizons, enabling them to become active participants in an ever changing, modern-day digital world.
- For children to become resilient and independent learners who will develop skills in critical thinking, problem-solving and creative design that are transferable to other curriculum areas.
- As effective and confident IT users, children will see technology as the 'go to' tool to support their learning
- As IT Users, children will ask and answer questions to develop a deeper understanding of how the world works. They will carry out research; collect, analyse and communicate data; exchange and present information in a variety of ways.

- They will be organised and flexible in their working ethic and be able to follow logical processes.
- Themed home learning tasks are designed to encourage and deepen children's own knowledge and interests.
- Our curriculum is tailored to the diverse needs of our children.
- We provide an enhanced curriculum which goes beyond the classroom, ensuring a breadth of experience which helps children take their place within their own community and beyond and become responsible digital citizens

Legal Framework: The National Curriculum

We use the National Curriculum for Computing (2014) and the EYFS Statutory Framework Guidance as the basis for our Computing programme.

The aims of the 2014 National Curriculum are for our pupils to:

- understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- be responsible, competent, confident and creative users of information and communication technology.

Aims and Objectives

The aims and objectives at Blessed John Duckett are for pupils to:

- Meet the requirements of the National Curriculum programmes of study for computing.
- Provide a relevant, challenging and enjoyable curriculum for computing for all pupils.
- Use ICT and 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 develop the understanding of how to use ICT and computing safely and responsibly.

Roles and Responsibilities

The Computing Subject Lead is expected to:

- Attend relevant CPD and Network meetings and feedback to staff
- Ensure that teachers have knowledge of the National Curriculum for Computing and know the expectations for their year group(s).
- Develop an effective Action Plan
- Prepare, organise and lead CPD
- Provide advice and support for staff regarding delivery of lessons
- Monitor pupils progress and subject coverage
- Assisting Senior Management with coordinating, developing and implementing the school's policy on Computing.

- Developing strategies for the efficient deployment of existing computing resources in the school.
- Consultation with the Head Teacher and staff regarding Computing objectives.
- Keeping abreast of and understanding and current technology, developments and trends relating to Computing and its use in Education by attending network meetings.
- Liaising with Durham County staff and other educational establishments on matters relating to Computing.
- Arranging for the upgrading or replacement of hardware and software as appropriate.
- Updating school policies relating to the teaching of Computing
- Taking the lead in the development, evaluation and amendment of knowledge maps as and when necessary.
- Ensuring assessment mechanisms inform teaching and learning and are being used effectively
- Carrying out an annual audit of resources, identifying any shortfalls.
- Ensuring all learning groups are catered for.
- Helping develop educational visits or specialist visitor provision across the school.

Class teachers are responsible for:

- Differentiating and adapting lessons to cater for all ability levels,
- Incorporating IT, where appropriate, when planning classroom activities.
- Understanding and utilising the range of software available in school and its use in relation to cross curricular activities.
- Loading and running programs.
- Using computer peripheral devices.
- Recognising and dealing with common faults and mistakes that can arise when using computing hardware and software.
- Maintaining own knowledge and skills of computing in accordance with educational developments.
- Ensuring children are responsible, respectful and safe when using IT.
- Reporting problems or faults to technician or ITSS.

IT Technician is responsible for:

- Installing and configuring hardware and software components to ensure usability.
- Troubleshooting hardware and software issues.
- Repairing or replacing damaged hardware.
- Upgrading the entire system to enable compatible software on all computers.
- Installing and upgrading anti-virus software to ensure security at the user level.
- Providing support to users.

Subject Content Overview

A high-quality computing education 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.

EYFS

The Early Years curriculum provides many opportunities to develop children's computational thinking which underpin the whole of the computing curriculum throughout KS 1 and 2. Computing is not just about computers, it is so much more. Linked to the characteristics of learning, children will problem solve, think logically, develop perseverance and resilience. A range of experiences are provided that encourage exploration, observation and discussion. These activities, indoors and outdoors, arouse children's interest and curiosity and encourages creativity.

Early years learning environments should feature computing scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as sound recorders, controllable vehicles, programmable robots and walkie-talkie sets.

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
- 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 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.

Planning

Our school uses the National Curriculum programme of study, including EYFS guidance as the basis for its curriculum planning in Computing

Computing is taught in termly blocks of discrete, sequential lessons as well as applying skills in other subjects making cross curricular links and fundamental connections that provide opportunities to review, remember, deepen and apply their knowledge and understanding.

Our curriculum planning is in three phases, long-term, medium-term and short-term.

Long term planning

The National Curriculum for Computing 2014 and the Early Learning Goals provide the long-term planning for Computing taught in the school. A long term map is created. Although in a mixed-age setting, we deliver computing skills that are year group specific to ensure coverage and progression.

Medium term planning

Teacher's medium-term plans are linked with the overarching term's topic. These have been carefully planned out through our rolling programme.

Teachers will use our own knowledge maps as starting points for their planning. This informs them, of the programme of study, key knowledge and skills, key vocabulary and links to previous work.

The subject leader reviews these plans on a regular basis ensuring key skills are being taught; learning objectives are being covered, in relation to a child's age-related expectations.

Short term planning

Teachers base their short-term planning on the areas indicated by the medium-term plans. The lessons are then broken down into small learning steps, with an enquiry lesson and objective written for each lesson as well as differentiated success criteria. Lessons are sequential; therefore ensuring children can build on their previous learning.

Children of all abilities have the opportunity to develop their skills and knowledge in each unit and, through planned progression built into the scheme of work, we offer them an increasing challenge as they move up the school.

Teaching and Learning

We use a variety of teaching and learning styles in our lessons. We believe in whole-class teaching methods and we combine these with enquiry-based research activities

Teachers use a range of resources, ideas and strategies to deliver lessons that are engaging and ensure pupil progress.

This is carried out through a mixture of whole-class teaching and individual or group activities. Teachers encourage the children to ask as well as answer problem solving questions. Children are also encouraged to be independent users and asked to explore the hardware or software.

As with every subject and class, we understand and recognise that we will have children with differing computing ability in all our classes and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

Assessment

Teachers use formative assessment consistently and effectively to assess the pupils' understanding and progress. This is carried out in many ways such questioning and discussions with pupils. The use of objectives and success criteria and effective feedback.

Teachers continuously evaluate each child's learning and progress. If appropriate children are given time to self-assess their learning and progress each lesson. Children's work is marked in line with the Marking Policy providing feedback and gives children opportunities to correct misconception and to further their understanding.

Using their knowledge of the pupil, teachers make summative assessments on a termly basis. They use their judgement of the work produced to make an assessment if a child is working at, below or above age-related expectations.

Monitoring and Review

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in Computing, in line with the school's monitoring programme. This will take the form of lesson visits, scrutiny of work, pupil discussion, learning walks, subject audits, pupil reviews etc.

The Subject Leader is also responsible for supporting colleagues in the teaching of Computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school.

The Subject Leader gives the Headteacher an annual action plan in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement.

The subject leader meets with the link governor to review the Computing element of the school improvement plan if appropriate.

Resources and Equipment

Every classroom has four desktop computers, and an interactive display board. Laptops and iPads are stored centrally and are timetabled for use.

Other age-related computing resources and equipment is also available within each classroom.

There is a designated area which can be used as a computer suite for small group work and a dedicated resource cupboard.

The subject lead will have overall responsibility for ensuring resources and equipment are safe to use and that any identified resource needs, hardware or software issues are brought to the attention of the Headteacher and the IT Technician.

[Appendix 2 – Software and Hardware Resource List]

Curriculum Links

There are many curriculum links that can be made to Computing when delivering other lessons, as computing is not only taught in discreet lessons but it embedded throughout the curriculum. Allowing children to apply and reinforce their skills and knowledge in a variety of contexts.

Each computing knowledge map provides potential links with other subject areas.

SMSC

In line with our mission statement, in working together, we strive to meet the spiritual, pastoral and academic needs of our children and community.

We demonstrate our love by caring for God's world and the diverse people in it.

We aim for respect, fairness and justice in all we do.

Home School Links

Topic overviews provide information to parents about what their children will be studying throughout the term. Parents are also informed of termly school visits and/or visitors which are organised to further enrich our curriculum.

Parents have the opportunity to attend consultation evenings on a termly basis. This concludes with an annual written report outlining pupil progress within all curriculum subjects. Curriculum Information is also provided on the school website.

Homework tasks are given on a termly basis in line with the topic being studied. This provides children with the opportunity to investigate, research and reinforce their skills in a practical, creative way. Homework tasks are cross curricular and designed in such a way to engage children and families in their own learning. [Homework Policy]

Equal Opportunities

At Blessed John Duckett RC Primary School we have due regard for our duties under the Equality Act 2010. Children are given opportunities to work with others, listen to each other and treat everyone with respect. We will ensure that we eliminate discrimination, advance equality of opportunity and foster good relations. We aim for every pupil to fulfil their potential no matter what his/her background or personal circumstances.

Please refer to our Equality Statement.

SEND

Through our teaching we provide learning opportunities that enable all pupils to make progress. We all recognise the importance of ensuring that children with identified Special Educational Needs and/or Disabilities have access to an ambitious curriculum. Within Computing, SEND children will be provided with reasonable adjustments through their tasks and level of challenge provided. Advice can be sought from the school's SENDco where applicable.

Please refer to the SEND Policy

Health and Safety

Where children use computers for curriculum work, the school has an e-safety policy to protect the staff, pupils and the school.

Internet use is only with adult supervision. Rules for internet use are displayed in each classroom Computer screens should always be visible. Safe Computer Use guidance is followed and Internet Use Policy in place.

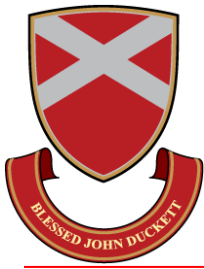
The school network is filtered and monitored providing effective safeguarding

PAT testing is carried out on all electrical computing equipment every 12 months.

Damage to equipment is reported to Subject Lead/Headteacher and repaired or discarded as appropriate.

GDPR policy guidelines are followed [see Data Protection Policy]

Use of ICT is in line with school's Acceptable Use Policy which is agreed to by all parties.



Year A			
	Forests	Voyages of Discovery	Mountains
	Autumn	Spring	Summer
EYFS	E- safety [Use the internet through computers, tablets. Only use with permission].	ICT skills [Familiarity with keyboard/mouse/apps]	Computing Science [Basic programming of beebots]
KS 1	E- safety [Personal information/using internet safely]	ICT skills [Logging on retrieve, saving and print work]	Computing Science [Scratch junior]
KS 2	E- safety [Cyber bullying, social media, risks, reporting]	ICT skills [PowerPoint, editing, IMovie, sound effects, spreadsheets]	Computing Science [Scratch, Kodu, Microbits]
Year B			
	African Adventures	Festival of Britain	Dig, Dig, Dig
	Autumn	Spring	Summer
EYFS	E- safety [Inform an adult if they see something they don't like]	ICT skills [Familiarity with keyboard/mouse/apps]	Computing Science [Basic programming of beebots]
KS 1	E- safety [Using Internet safely]	ICT skills [Logging on retrieve, saving and print work]	Computing Science [Scratch junior]
KS 2	E- safety [Cyber bullying, social media, risks, reporting]	ICT skills [PowerPoint, editing, IMovie, sound effects, spreadsheets]	Computing Science [Scratch, Kodu, Microbits]
Year C			
	Myths & Legends	Explorers and Travellers	Helpful Heroes
	Autumn	Spring	Summer
EYFS	E- safety [Use the internet through computers, tablets. Only use with permission].	ICT skills [Familiarity with keyboard/mouse/apps]	Computing Science [Basic programming of beebots]
KS 1	E- safety [Personal information/using internet safely]	ICT skills [Logging on retrieve, saving and print work]	Computing Science [Scratch junior]
KS 2	E- safety [Cyber bullying, social media, risks, reporting]	ICT skills [PowerPoint, editing, IMovie, sound effects, spreadsheets]	Computing Science [Scratch, Kodu, Microbits]
Year D			
	Our World, One World	Travel and Transport	Castles and Coast
	Autumn	Spring	Summer
EYFS	E- safety [Inform an adult if they see something they don't like]	ICT skills [Familiarity with keyboard/mouse/apps]	Computing Science [Basic programming of beebots]
KS 1	E- safety [Personal information/using internet safely]	ICT skills [Logging on retrieve, saving and print work]	Computing Science [Scratch junior]
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