School Policy Document

Title: Computing and ICT

Purpose: Supporting teaching and learning of Computing and ICT
Lead Role Responsibility: ICT & Computing Subject Leader – Seb Craig
Governing Body Team or Head Teacher Responsibility: Curriculum Team

Reference and Source Documents: No Source Document – Written and updated by Computing Subject Leader

Approved by Leadership: January 2022
Approved by Governing Body: *31.1.22*
Reviewing Cycle: Every 2 Years
Next Review Due: Spring 2024

St Barnabas CE Primary School Computing Policy

Inspire, Nurture and Achieve

We believe, as Jesus did, that in our happy, purposeful and welcoming **Christian school** and pre-school **all** are **valued**, **encouraged** and **cared for**:

- **Inspire** the school community to think and feel positively about themselves and others.
- **Nurture** each child and adult so that they grow with others in a secure and happy environment; where they enjoy a wealth of opportunity and experience a love of learning.
- A place where **achievements** are celebrated and expectations are high for all.

This is underpinned through the understanding that in Jesus, **all** are welcome and unique and have a God given purpose and place in the world. Jesus inspires us that **all** people can flourish.

Matthew 19 v14

Jesus said, "Let the children come to me, and do not hinder them,
for the kingdom of heaven belongs to such as these."

We aim to:

Inspire *a positive approach to life and learning;*

Value and ***nurture*** *each child as an individual: developing* ***resilience****,* ***independence,*** *and an* ***understanding*** *of what they bring to the world;*

Create a rich, stimulating environment where ***achievements*** *are celebrated and* ***team work*** *and* ***co-operation*** *are expected;*

Promote ***high expectations*** *and* ***self-confidence*** *for each individual;*

Ensure each child strives towards ***excellence*** *supporting those who find learning difficult and challenging the most able children;*

Develop and foster ***motivation*** *for learning and* ***enthusiasm*** *for life;*

Promote a sense of ***belonging*** *and build outstanding* ***relationships*** *between school, home, church and the wider community.*

Help every person understand their ***unique purpose*** *and* ***place*** *in* ***God's world.***

1. Vision statement:

With computing and technology now forming a huge part of current day life, it is vitally important that we equip our children with the Computing skills and confidence to use technology throughout their lives. It is our vision to encourage and interest our school children through the use of Computing as a teaching and learning tool. Our aim is for all children to leave St Barnabas as responsible and forward thinking digital citizens.
A good Computing student at St Barnabas will;

- Combine and refine information from various sources
- Interpret and question the plausibility of information
- Present information in different forms
- Refine the quality of their presentations showing an awareness of purpose and the intended audience
- Combine the use of computing tools

- Critically evaluate their work and know how to improve future work
- Monitor and measure external events with sensors
- Control events in a pre-determined manner

2. Agreement date of Policy:

The policy was approved by Governors 31.1.22

3. Aims:

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.

4. Curriculum Development and Organisation:

Early Years

It is important in the foundation stage to give children a broad, play-based experience of computing and in a range of contexts, including indoor and outdoor play. The statutory framework for the Early Years includes the prime areas and specific areas of learning. Technology can be used across a wide range of areas but specifically in Communication and Language and Understanding the World. Early years learning environments should feature technological scenarios based on experience in the real world, such as in role play. Children should be promoted to talk about technology and computing that is used in the real world. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy.

Outdoor exploration is an important aspect, supported by computing toys such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording using different media devices can help support children to develop their communication skills. This is particular useful with children who have English as an additional language.

By the end of 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 a sequence of instructions.
- Write and test simple programs. Children will be exposed to these skills by using Coding toys and Coding programs such as Espresso Coding and Scratch Junior.
- Use logical reasoning to predict and computing the behaviour of simple programs organise, store, manipulate and retrieve data in a range of digital formats.
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.
- Connecting a device to the online provision, for example Kahoot! and, to be able to take part in quizzes, discussions or surveys together with the class.

- Use Seesaw to complete home-learning activities by using built-in annotation tools to capture.

By the end of Key Stage 2 pupils should be taught to:

- Design and write 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; generate appropriate inputs and predicted outputs to test programs
- Use logical reasoning to explain how a simple algorithm works 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
- Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- 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.
- Use an online program like Times Tables Rockstar correctly and safely.
- Use the online resource MyBookBlog to create a blog post responding to a book, to discover and explore new books using the online library and to respond appropriately using the online format.
- Use Seesaw to complete home-learning activities by using built-in annotation tools to capture.

Hardware available:

All children have an allocated weekly time slot to use the computer suite to develop their computing skills through ICT lessons. Currently the ICT suite has 14 computers, enabling pupils to work collaboratively or individually. During the morning the ICT suite is allocated and used effectively to enhance teaching and learning across all curriculum areas. There is also a mini-computer suite available in KS2 (7 computers) which can be used for intervention groups that can incorporate computing skills into their lessons.

Each class in school has one computer and a teacher's iPad.

There is a new school set of iPads (32: available in 2 portable charging stations) which are time allotted to each class. This enables teachers to integrate teaching computing during their everyday lessons. Additionally, Reception have 4 iPads and Year One have 10 iPads to support their learning within the classroom.

Each class has an Interactive Whiteboard and visualiser for interactive teaching.

There is a school set of 15 Redbox Virtual Reality headsets, which can be used as for VR Expeditions 2.0 or as an interactive VR lesson.

There are also 44 laptops also available to be used throughout the school.

All teachers have been offered newly refurbished laptops to be used at school and home to help plan and evaluate learning and home-learning. Each computer in school (including laptops) has access to the internet via a high-speed Broadband connection which has proved very useful for research and teaching.

6. Teaching and Learning:

Computing in Early Years Foundation Stage:

Children take part in a variety of tasks with digital devices, such as moving a Bee Bots around a classroom, or programming a Code-a-Pillar which will get them familiar with computing that comes later on in the KS1 curriculum. Children will also be promoted to handle, use and care for tablets and other small technology devices via playing educational games or taking photos or videos. Children will also be exposed to computing through the class computer and whiteboard and be encouraged to use both of these. Computing in EYFS can take a more 'unplugged' style of teaching, which incorporates lots of computing skill based activities that allows learners to access computing concepts without the use of a computer. This can make lessons more engaging and accessible to the children and teachers in EYFS.

Computing and ICT Long Term Plan

National Curriculum Objective	Year 1	Year 2
1. Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Using **Dazzle** to create/saving and retrieving work/printing **Green Screening**	Using more advanced tools in a paint package **Dazzle** **Green Screening**
2. Recognise common uses of information technology beyond school.	Logging on and off/mouse skills/ copying images from the internet. iPad/tablet skills through games and apps	Technology all around us; robots and machinery. How humans implement coding to make our lives easy.
3. Use logical reasoning to predict the behaviour of simple programs.	**Espresso Coding**:- Simple inputs	**Espresso Coding**:- Different sorts of inputs
4. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	**Espresso Coding** :- On the move	**Espresso Coding**:-Buttons and instructions **Scratch Junior**- Learning the Basics.
5. Create and debug simple programs.	**Espresso Coding**:- On the move, Simple inputs via warning console	Controlling a floor and screen turtle/Beebot/Code-a-Pillar using direction and coordination
6. 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.	**Green Screening**	Questions and Answers, Kahoot!
	E-Safety Week- discussing and working on the dangers, benefits and importance of the internet.	

National Curriculum Objective	Year 3	Year 4	Year 5	Year 6
1. design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	**Espresso Coding** Conditional events selection	**Kahoot!** Creating their own Kahoot quizzes.	**Charanga Digital Music Composition**	**Scratch**: Creating a WWII scene
2. use sequence, selection, and repetition in programs; work with variables and various forms of input and output	**Espresso Coding** Conditional events selection	**Espresso Coding** Introducing to variables	**Espresso Coding** Random number and Simulations	**Espresso Coding** More complex variables
3. use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	**Scratch Junior**- Learning the basics of coding via Scratch	**Scratch:** Repetition and loops	**Scratch:** Creating a dialogue between characters.	**Espresso Coding** Object properties
4. 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	**Google Maps** linking with Geography Green Screen/ Filming	**Stop Motion Films**	**Scratch:** Speed direction and co-ordinates	Group project Raspberry Pi (2021)
5. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	**Word 2010** combining text and graphics	**Word 2010** Writing for different audiences	**Graphical modelling** Analysing data from databases and spreadsheets	**Publisher:** Using search engines to create collages.
6. 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	**Dazzle** developing graphics skills **PowerPoint** creating and presenting	**PowerPoint** Developing images using repeated patterns	**Powerpoint** Multimedia presentations	**Excel**: Understand the advantages of spreadsheets
7. use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	**Times Tables Rockstars** ***My Book Blog*** [Throughout year]	**Times Tables Rockstars** **My Book Blog** [Throughout year]	**Times Tables Rockstars** **My Book Blog** [Throughout year]	**Times Tables Rockstars** **My Book Blog** [Throughout year]
	E-Safety Week- discussing and working on the dangers, benefits and importance of the internet.			

At St. Barnabas, our cross-curricular approach to teaching provides opportunities for reinforcing the core areas of learning through the well planned use of technology.

7. Inclusion and Equal Opportunities:

St Barnabas Primary School will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to computing and all staff members follow the Equality Policy. Children who have less opportunities to access computing or devices at home should be made aware of, and during lessons should be given more time and support to accommodate for their potential lack of experience. Resources for SEN, more able, gifted and/or talented children will be made available to support and challenge appropriately.

Disadvantaged pupils have been supported to receive or be loaned a laptop or other device to use at home via the school (Pupil Premium Grant) and additional government provision via the Get Help With Technology national scheme in both 2020 and 2021. Parents and Carers of disadvantaged pupils are supported to access this school offer.

Regular assessment of pupil needs plays a vital role here, as does the provision of appropriate resources. The internet, computers, iPads and our whiteboards offer a wealth of materials that can be matched to suit individual or group needs, enabling all pupils to develop their computing skills.

8. Roles and Responsibilities:

The Computing Co-ordinator/Subject Leader is responsible for:

- Overseeing the computing curriculum
- Monitoring the learning and teaching
- Ensuring the assessment is relevant and informative
- Making purchasing decisions
- Ensuring all staff are appropriately trained in both using and delivering the computing curriculum
- Keeping up to date with developments in ICT via local and national networks
- Liaising with the computing technician to make sure computing resources are up to date
- Observing computing lessons
- Monitoring and supporting computing planning
- Preparing policy documents
- Advising colleagues and helping to develop expertise
- Liaising with the Computing team
- Contributing to and leading staff ICT INSET training

The school employs a technician to deal with the technical support of our system.

In addition we have an appointed Computing Governor to support and monitor school improvements in computing. The Computing Governor is responsible for reporting back team decisions to the full governing body.

We have a school Computing team consisting of:
Computing co-ordinator/subject leader- Seb Craig
Headteacher- Sarah Hanson
Deputy Headteacher- Kate Robertson
Network Manager/Technician- Martin Cockersole

The Computing team meets regularly to discuss current practice, purchasing decisions and future developments.

9. Subject Monitoring / Evaluation of provision:

The computing coordinator/ subject leader is responsible for monitoring and evaluating the curriculum and pupil progress. This is done through; work scrutiny, lesson observations, professional discussion and mini review to the Governing Body.

10. Pupil Assessment:

On-going teacher assessment and evaluation continues in each year group. Each pupil has an electronic folder of their work which follows them through the school. Computing skills are assessed termly through Espresso, Scratch, Word, PowerPoint, discussions and teaching judgement. Pupils assessed work is saved in their year group area within designated areas.

11. Health and Safety Issues:

The ICT suite and all classroom computers are regularly checked in accordance with our Health and Safety policy.

Every possible step is taken to prevent exposure of children to undesirable or inappropriate materials on the internet including firewalls and close supervision of pupils when working on-line. The school has a separate “Acceptable Use” policy to outline the methods we use to ensure this. In addition we ask for parental permission for each child before they are allowed internet access in school. Internet Safety is a regular and integral part of the ICT curriculum and highlighted during the annual Internet Safety Week.

Please refer to the school Health and Safety Policy for further information.

12. Management Information:

Each year a review of Computing and ICT provision, looking specifically at the Computing Development Plan is carried out. We pay particular attention to the Planning Matrix and we examine areas we feel we need to develop as a school. Funding is put in place to achieve these aims. All decisions are made after due consultation with the Head, staff, the governors and our school technician.

Our security procedures are as follows:-

- All classrooms have movement sensors that trigger the alarm
- All laptops are kept locked away when not in use
- All serial numbers of equipment worth over £50 are kept in a log book
- All equipment taken off the school premises is signed for
- Any personal/confidential data transported off site is done so on encrypted media
- Personal/confidential information within school is stored and used within GDPR guidelines.

  For further information please see School Privacy Notice and GDPR Policy information.

13. Password Policy Framework:

Having varied and secure passwords for each of our devices and memory stores is vital. Either the network manager or staff member are responsible for choosing and maintaining secure passwords. Here are some outlines we follow at St Barnabas to ensure our data is protected:

-Passwords cannot contain all or part of your user account name or login id.
-Users must not use the same password for different accounts/devices as if one account is at risk it will put all other accounts/devices at risk.
-The password must be at least eight (8) characters in length.
-Passwords should contain at least one of each of these characters; uppercase letter, lowercase letter, number/s and a non-alphabetical character (!,£,$,&,?).

Passwords should be changed every 180 days. Passwords must not be shared with anyone. All passwords are to be treated as sensitive and confidential information.

Passwords should not be shared with any other members of staff. They should not be stored if possible. In any cases where passwords must be stored they should not be stored in the same place and they all must be encrypted.

14. Liaison:

To ensure consistency and progression in the computing curriculum throughout the school we:-

- Teach computing skills one session per week.
- Meet together regularly in separate key stages to discuss current ICT issues
- Discuss computing requirements in whole staff meetings
- Attend training in key stage or whole staff groups
- Use i-track assessment system to record and store attainment information for each pupil.
- Pass relevant records of attainment and pieces of computing work up to next class teacher.

- Attend liaison meetings with local network groups, schools and other computing leads

15. Home / school links:

We see the relationship with parents and carers as very important in supporting their child's computing skills. We aim to encourage parental involvement as much as possible. To date the following are in place:-

- Promote the sharing of information related to the curriculum and internet safety
- Email addresses for parents to contact the Headteacher, the school office and the Governing Body.
- Parental permission to allow children to use the internet
- Access to online portals such as; Seesaw, My Book Blog, Oxford Owl and Times Tables Rockstars is shared and additional support offered to families who need this.
- Access to children in school and at home to the Worcestershire Learning Gateway.
- Letters are sent home at regular intervals to remind Parents / Carers and children of the current Global Identification user name and password for the Learning Gateway.
- Invitations to parents to join in with internet safety lessons or workshops during the Spring term
- Updates on year group pages, school website and photos shared on school Twitter Feed to keep the school community informed.
- A weekly newsletter and other information published regularly on our school website.

17. Copyright:

We follow the Local Authority guidelines regarding software copyright and data protection. All software licenses are kept securely within school.

18. Date to be reviewed*:*

Spring Term 2024