



St. Anne (Stanley) C of E School

Computing Policy

A Baseline for Achieving Excellence in Computing

September 2021 – September 2023



St. Anne (Stanley) C of E School

COMPUTING POLICY

1.)Intent

Curriculum Vision:

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, 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 (National Curriculum, 2014).

The implementation of this policy is the responsibility of all teaching staff.

Aims Of Subject:

The aims of Computing at St. Anne (Stanley) are:

- Enable children to use and apply their ICT knowledge, skills and understanding confidently and competently in their learning and everyday contexts.
- Enable them to become more independent and discerning users of technology, recognising opportunities and risks and using strategies to stay safe.
- Build confidence in all children in their use of ICT equipment.
- To extend and enhance learning in all subject areas of the Early Years Foundation Stage Curriculum and the National Curriculum through use of ICT as a teaching and learning tool.
- Enable children to recognise that ICT affects the way in which people live and work safely.
- 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 of computer science, including logic, algorithms, data representation and communication.
- 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.

School values:

Our school values are Honesty, Friendship, Understanding, Hope, Confidence and Family. These values underpin our ethos and are embedded across the curriculum. Honesty is reinforced through investigating people of the past and understanding the motives behind their actions. Friendship is promoted through learning about relationships between other countries. Understanding is highlighted by children gaining and understanding of the past, present and the future, how and why world events happened and the consequences they have had on the modern world. Hope is embedded through looking at the resolutions of past conflicts and how harmony and peace can be created. Confidence is encouraged through investigating leaders of the past and how confidence in their own actions and beliefs had major impact on changing the world. The final value of Family is fostered through learning about Royal families and studying their own family backgrounds.

Planning and sequencing:

Computing can be divided into three areas. Computer Science, Information Technology and Digital Literacy (which includes esafety). The aims for the new computing curriculum as identified in the Program of Study as issued by the Department for Education have been categorised into these three areas detailed below.

Area	Key Stage 1 Aims	Key Stage 2 Aims
Computer Science (CS)	1. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. 2. Create and debug simple programs. 3. Use logical reasoning to predict the behaviour of simple programs.	4. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. 5. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. 6. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 7. Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web. 8. Appreciate how [search] results are selected and ranked.
Information Technology (IT)	1. Use technology purposefully create, organise, store, manipulate and retrieve digital content.	2. Use search technologies effectively. 3. 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
Digital Literacy (DL)	1. Recognise common uses of information technology beyond school. 2. Use technology respectfully and safely, 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.	3. Understand the opportunities [networks] offer for communication and collaboration. 4. Be discerning in evaluating digital content. 5. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Curriculum Planning

Early Years Foundation Stage

Nursery and Reception children follow the Early Years Outcomes and for guidance refer to the Development Matters in the Early Years Foundation Stage (EYFS) as set out by The British Association for Early Childhood Education. The Understanding of the World area of learning; forms the foundations of later work in science, history, geography and computing. For the purposes of this policy and scheme of work practitioners will deliver the Technology objectives from the EYFS.

Learning will be provided by the four core principles for the Foundation Stage:

- A unique child.
- Positive relationships.
- Enabling Environments.
- Learning and Development.

Children will develop skills, knowledge and understanding of the following Early Years Outcomes Objectives within Technology:

Age	Early Years Outcomes
22-36 months	• Seek to acquire basic skills in turning on and operating some ICT equipment. • Operates mechanical toys.
30-50 months	• Knows how to operate simple equipment eg turns on CD player and uses remote control. • Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. • Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. • Knows that information can be retrieved from computers.
40-60+ months	• Complete a simple program on a computer. • Uses ICT hardware to interact with age appropriate computer software.
Early Learning Goal	• Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

Key Stages 1 and 2

In Key Stages 1 and 2, computing is taught discretely with links made to other subjects where appropriate to maximise children's learning. It is delivered in six half term blocks during each year.

The Computing Leader provides long term planning to each class teacher. The teacher produces medium and short term planning, using both the 'National Curriculum' and the 'Switched on' scheme of work which has been specifically adapted for the needs of our children. The Medium term plans identify learning objectives and outcomes for each unit and are monitored by the Computing Leader to ensure planning for progression.

Key Stage 1

The National Curriculum Programme of Study at Key Stage 1 focuses on developing children's computing skills and processes.

In planning to ensure the progression described above through teaching about algorithms and debugging simple programmes, together with using technology safely and respectfully, as outlined below, teachers are often introducing pupils to more complex programmes that they will study more fully at Key Stage 2.

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

The National Curriculum Programme of Study at Key Stage 2 should continue to allow children to develop computing skills and knowledge. Computing also ensures that pupils become digitally literate, who are able to use, and express themselves and develop their ideas through, information and communication technology at a level suitable to be developed further at Key Stage 3 and beyond.

In planning to ensure the progression, teachers should combine overview and depth studies to help pupils understand both the long arc of development and the complexity of specific aspects of the content.

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.

Curriculum map: See separate document

Schematic links:

Computing contributes to many areas of the curriculum at St. Anne (Stanley) but links particularly well with:

English

Computing contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. Reading skills are developed through use of a wide range of reading materials and the Reading Plus online reading programme. For example, in Key Stage 2 we use the online books to enhance the children's knowledge and understanding of all areas of the curriculum. The children are motivated as it is designed as a computer game with levels of progression. They develop their computing skills by composing a wide range of responses including, reports and letters and leaflets.

Mathematics

Computing teaching contributes to the teaching of mathematics in a variety of ways. Children learn to use data, graphs and charts in computing which are transferrable skills that can be used in mathematics.

Foundation Subjects

We use ICT across the curriculum in our foundation subjects. For example, in history they use their skills in data handling, researching information and presenting their work in written and other formats such as film. Children have the opportunity to use digital cameras to record and to use photographic images to aid the making of films.

2. IMPLEMENTATION

At St. Anne (Stanley) Computing will be taught through the Programmes of Study as outlined in the National Curriculum in England (DfE 2013) and Early Years Foundation Stage.

High quality teaching and learning:

The teaching and learning of computing should be stimulating and motivating. Pupils should enjoy developing their knowledge and skills and begin to perceive the world as an interesting place. Teaching should involve encouraging children to ask questions, to identify ways in which they might find the answers and finally to search for those answers.

Opportunities to develop subject specific literacy – oracy and vocabulary:

Progress – knowing more and remembering more:

- Teachers to provide teaching and learning experiences that encourage pupils to think creatively, explore and develop ideas, and try different approaches. Pupils should be encouraged to set their own questions, offer ideas, suggest solutions or explanations, and reflect on what they have heard, seen or done in order to clarify their thoughts.
- Greater independence in working, e.g. a pupil to be able to create and debug their own programmes or carry out their own simple enquiries by using search engines effectively.
- Provision of real-life research and presentation opportunities.
- Encouragement of children to communicate their understanding in a variety of ways, giving them responsibility for choosing and evaluating the most appropriate method rather than giving gifted pupils additional tasks.
- Provision of opportunities within computing for pupils to develop their skills in other areas, such as intrapersonal skills (for example, opportunities to use initiative), and interpersonal skills (for example, leadership and group membership). These opportunities also relate to the key skills of working with others and improving own learning and performance.

At St. Anne (Stanley) the purpose of monitoring and evaluation activities is to raise the overall quality of teaching and levels of pupil attainment. The Computing Leader and the Senior Leadership Team will monitor the quality of teaching and learning throughout the school as part of the whole school monitoring cycle.

Assessment:

Assessment is an integral part of teaching and learning in St. Anne (Stanley). Pupils are encouraged to save their work in relevant electronic files. Examples of children's work will be photographed by the class teacher and published on their class page as evidence.

- a. Teachers assess children's work in computing by making informal judgements through observation of the children's work against the learning objectives for the series of lessons. On completion of a piece of work, the teacher assesses each child's work and provides comments as necessary.
- b. At the end of each unit of work, the teacher makes a judgement about each child's work in relation to the National Curriculum Programme of Study and the objectives set. This will be recorded as **working towards** the objectives set, **meeting** expectations or **exceeding** to inform an annual assessment of progress for each child, as part of the annual report to parents. During the Foundation Stage children will be assessed as part of Understanding the World against the development matters statements and early learning goals.
- c. A copy of this record is kept in the class assessment file and a copy is given to the Computing Leader. Each teacher passes this information on to the next teacher at the end of each year.
- d. Children's work will be saved in their electronic folders and photographs will also be taken to be published on the class page on the website.

- e. Reporting to parents takes place through parent/teacher consultations three times a year and through annual written reports.

Learning environment:

In St. Anne (Stanley) we pride ourselves on our sense of community and make every effort to open our doors to share our learning with other members of the St. Anne (Stanley) family.

Where appropriate opportunities are often planned into the end of a topic for children to share their knowledge. This is done in many ways through either displays in classrooms, corridors or other shared areas, dramatic performances where parents and families are invited into school to watch the children, or by podcasts and class pages via the school website.

Every class have been allocated six iPads for easy access to Apps and the internet and for cross curricular activities. Most resources are centrally stored, largely in the ICT suite. All staff may access them, but they are responsible for their prompt and orderly return. Any breakages and/or resources that need replenishing should be reported to the Computing Leader immediately.

The school's resource base contains high quality equipment, which we try and keep as current as possible. The new resources enrich and stimulate children's computational thinking. A full inventory of resources is held by the Computing Leader. Resources are audited each year by teaching staff.

Inclusion:

St. Anne's is committed to:

- Opposing all forms of discrimination – individual and institutional, direct and indirect;
- Challenging all forms of discrimination about different groups in society;
- Translating good equal opportunities principles into all our policies and practice;
- The need to allow pupils to be able to work in their preferred learning styles for some of the time;
- Using materials for teaching which avoid stereo-typing, and bias, towards different groups in society;
- Maintaining and developing an inclusive culture where every individual feels valued and aspires to succeed.

At St. Anne (Stanley) we teach computing to all children, whatever their ability. Computing forms part of the school curriculum to provide a broad and balanced education to all children. Through our computing teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. We use a range of strategies to support pupils including:

- The use of appropriate vocabulary at varying levels of difficulty during lessons;
- Modified activities as expected in other curriculum areas;
- Careful use of support for pupils with English as an additional language.

SEND

At St. Anne (Stanley) C of E Primary School, we aim to create a fully inclusive, person centered environment which reflects the values of our Church of England faith. The views and needs of the child and their families/carers are at its heart to encourage a strong focus on high aspirations and on improving outcomes for children with SEND, to enable them to succeed in their education and make a successful transition into adulthood.

We will consider the following approaches in our teaching of Computing to children with SEND.

- Maintain an inclusive learning Environment considering the following:
 - Sound and light
 - Seating
 - Resources
 - Displays
- Multi-sensory approaches considering the following:
 - Learning styles
 - Use of ICT
- Working with additional adults considering the following:
 - Consulting children's
 - Planning support
 - Evaluation
- Managing peer Relationships considering the following:
 - Grouping pupils
 - Managing group work and discussion
 - Developing responsibility
- Adult-Pupil communication considering the following:
 - Teachers' communication
 - Children's communication
 - Child-teacher interaction
- Formative assessment considering the following:
 - Understanding the aims of the lesson
 - Focus on how children learn
 - Children know where they are in relation to the aims
 - Giving feedback
 - Understanding assessment criteria
 - Reviewing progress and helping children to improve
 - Gathering assessment evidence
- Motivation considering the following:
 - Understanding the structure of the lesson
 - Relevant and motivating tasks
 - Reward systems
- Memory/consolidation considering the following:
 - Pre-teaching of key vocabulary
 - Recap of Prior learning and vocabulary
 - Reducing resilience on memory
 - Consolidating learning

EAL:

All pupils at St. Anne (Stanley) need to feel safe, accepted and valued in order to learn. For pupils who are learning English as an additional language, this includes recognising and valuing their home language and background. As a school, we are aware that bilingualism is a strength and that EAL pupils have a valuable contribution to make in Computing. We take a whole school approach, including ethos, curriculum, education against racism and promoting language awareness in his subject.

We will ensure our learning environment is welcoming to everyone. We will ensure we have dual language displays where appropriate in our subject area to support EAL and help them to feel comfortable. Specific resources will be made/ordered to match the language of our EAL pupils in Computing.

Pupils learning English as an Additional Language are entitled to the full National Curriculum Programmes of Study and at St. Anne (Stanley) we will ensure all EAL pupils will achieve the highest possible standards by taking into account each child's life experiences and needs so they can succeed in Computing.

SMSC/British Values:

Computing contributes significantly to the teaching of personal, social, citizenship and health education. Children develop self-confidence by having opportunities to understand the significance and importance of computing in the wider world. They discover how to be active citizens in a democratic society by learning how laws are made and changed, and they learn how to recognise and challenge stereotypes and to appreciate that racism is a harmful aspect of society. They learn how society is made up of people from different cultures and start to develop tolerance and respect for others this includes using technology respectfully and responsibly.

When teaching Computing, we contribute to the children's spiritual development where possible. We also provide children with the opportunity to discuss moral questions, or what is right and wrong, when studying topics such as digital literacy.

Enrichment:

Enrichment opportunities to enhance learning in computing are wide ranging and should be planned including learning visits and visitors to school. The school is well situated and resourced to access many places of interest and possible activities are identified in the Long Term Plan.

Learning visits should be selected for their relevance to the area being explored and might include a visit to the Apple workshops.

There are also planned whole school enrichment events such as the robotics event, Everton FC technology and e-safety events and Google.

Homework:

Occasionally homework will be given in Computing for children to complete at home.

3. Impact: what will our children look like?

Resilient, inquisitive, confident, ambitious, challenged, empathetic, compassionate, respectful, reflective, thriving, articulate, knowledgeable.

Name: Cathy Carlsen
Subject Coordinator 2021

Name: Keshia Broughton
Subject Coordinator 2022

This policy will be reviewed every two years.

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