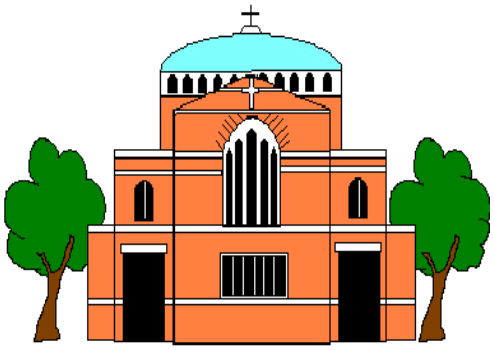


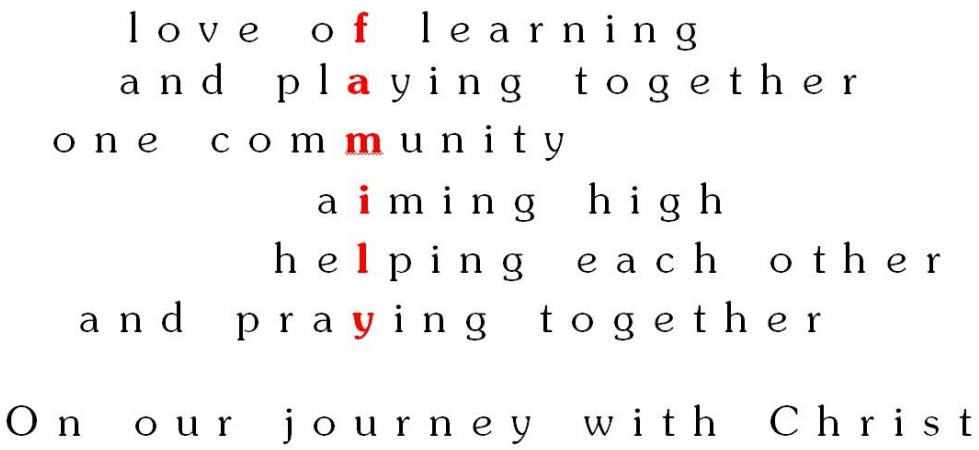
St John's Catholic Primary School

Computing Policy

M. Unsworth

Review Sep 2020

Mission Statement



The aim of this policy is to guide teachers and support staff in providing the best possible learning experiences for our children. We believe that every child is a child of God; we will encourage in all children the knowledge and love of God, and in a concern and care for others; we will value each child for who they are and what they are; and we will ensure that every child has the opportunity to become the person God knows them to be, irrespective of their starting points, background or cultural and religious beliefs.

Our mission sets out our commitment to 'aiming high'. Improvements in the quality of teaching and learning are brought about through a process, which involves:

- reflection by individual professionals
- acting on planning feedback and guidance
- use of assessment data
- the target setting process
- sharing in-house expertise through
    - joint/team planning
    - discussion with colleagues, subject coordinators and SLT
    - Staff training at school
    - Team teaching lessons
    - Peer observation and lesson studies
- implementation of recommendations arising from classroom observation
- effective response to guidance from advisers and implementation of OfSTED Action Plan
- CPD courses

This policy will be reviewed regularly to enable us to take account of new initiatives, curriculum changes, technological developments and any changes to our pupil cohort profile.

Aims and Objectives

The national curriculum requires schools to ensure that:

at 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

at Key Stage 1

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

Teaching and Learning

As the aims of Computing are to equip children with the skills necessary to use technology to become independent learners, the teaching style that we adopt is as active and practical as possible.

When introducing new concepts, we will use direct instruction on how to use hardware or software; however, the main method of teaching is participative, where individuals or groups of children evaluate, modify and improve their work through an experiential process. Alongside this, we encourage the development of:

- Computational thinking approaches- debugging, tinkering, collaboration, creating and persevering

- Computational thinking concepts - abstraction, decomposition, logic, algorithms, evaluation and patterns

Additionally, we identify where computational thinking and computing is embedded in other subjects – *drawing conclusions from science investigations (logical thinking); correcting answers in maths (debugging), writing or following instructions in literacy (algorithms)* – and where computer science concepts can augment other subjects – *use of green screen technology to illustrate a story in literacy; programmes to control machines in DT (eg Lego WeDo)*. As part of our everyday teaching, we actively highlight this link between computing and other subjects

We recognise that our children have differing abilities in computing. This is especially true when some children have access to computing equipment at home, while others do not. We tackle inequality in access to computing equipment by providing a well-resourced media suite, tablets that can be used as a class set, with additional tablets in each class for pupils to take home to consolidate and extend their learning. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child; we differentiate by starting point, prior learning, ability, resources and support.

Curriculum Planning

The school uses the National curriculum scheme of work for Computing as the basis for its curriculum planning. Our long-term plan maps Computing units onto our existing curriculum plan and shows how teaching units are distributed across the year groups and fit together to ensure progression within the curriculum plan.

Our medium-term plans give details of each unit of work for each term. They identify the key learning objectives which will be covered in that particular unit of work. These units are drawn from:

- Excellent resources available to school – barefootcomputing.org, the SCRATCH coding initiative, etc
- Teacher-written activities that develop computational approaches and concepts through other subjects and the wider curriculum topic

or

- A combination of the two options above

The topics studied in Computing are planned to build upon prior learning. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move up through the school.

Contribution to the Catholic Ethos

I have come that they may have life, and have it to the full

John 10:10

By preparing our pupils fully and appropriately for life in a rapidly changing and technological future, we are ensuring that they are best placed to fulfil their God-given potential and to become active and compassionate members of their local, national and global communities. Our computing curriculum prepares our children to use new technologies in a safe and appropriate manner, allowing them to safeguard themselves and others from harm.

Contribution to the other curriculum areas

Computing contributes to teaching and learning in all curriculum areas. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, while the Internet proves very useful for research in humanities subjects. Information technology enables children to present their information and conclusions in the most appropriate way.

English

Information technology is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. They have the opportunity to develop their writing skills by communicating with people over the Internet. They learn how to improve the presentation of their work by using presentational or publishing software.

Maths

Many Information technology activities build upon the mathematical skills of the children. Children use information technology in mathematics to collect data, make predictions, analyse results, and present information graphically. They also acquire measuring techniques involving positive and negative numbers, and including decimal places.

Personal, social and health education (PSHE) and citizenship

Information technology makes a contribution to the teaching of PSHE and citizenship as children learn to work together in a collaborative manner. They develop a sense of global citizenship by using the Internet and e-mail. Through the discussion of moral issues related to electronic communication, children develop a view about the use and misuse of technology, and they also gain a knowledge and understanding of the interdependence of people around the world.

Inclusion

At our school, we teach computing to all children, whatever their ability and individual needs. This is in line with the school's curriculum policy of providing a broad and balanced education to all children. Through our computing teaching, we provide learning opportunities that enable all pupils to make good progress. We strive to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details see the SEND policy.

Assessment for learning

At the end of each unit of work, the class teacher will assess the children on the particular part of the computing curriculum they have been focusing on. This will be recorded on our online tracking system, and used to make an overall judgement at the end of the year using the terminology 'working towards', 'expected standard' or 'greater depth'. This information is reported to parents on the end of year report and the class information will be passed on to the next teacher.

Monitoring and review

The subject leader will monitor teachers long term plans to ensure that all of the computing skills are being covered. Books will also be scrutinised to see evidence of computing that is practical and differentiated (work that is saved online will be included in scrutinies) and lesson observations will be undertaken to ensure high-quality delivery and a match between the planned curriculum and the learning taking place in classrooms.

Date of Policy: Sep 2019 Date of Review: Sep 2020