



St Michael's
C.E. Primary School

Computing Policy

This policy is embedded in our school's mission statement of:

'Aspire, Nurture and Flourish in the love of God.'

Subject Policy	Computing
Date	September 2022
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At St Michael's CE Primary School, our vision is to have confidence to raise up aspirations, to show gentleness to nurture each other and courage to enjoy and flourish, to achieve our very best.

In short:

Confidence to Aspire

Gentleness to Nurture

Courage to Enjoy and Flourish

Our Vision

The school's vision at St Michael's CE Primary School is firmly rooted in our mission statement of 'Aspire, Nurture and Flourish in the love of God.'

This is underpinned by the four key learning values of:

- **Ready**
- **Respectful**
- **Responsible**
- **Resilience**

We believe that every child should be encouraged to have high aspirations, flourish in all areas of school life and be nurtured by all members of our school community.

Our Aim

Our curriculum intent at St Michael's is to provide a broad, exciting and challenging curriculum of the highest quality for the children in our care; encouraging, motivating and ensuring all children develop a love of learning, in order to achieve their full potential.

Our curriculum will be implemented through knowledge-led experiences, enabling the children to increase their knowledge, learn and master new skills and therefore, deepen their understanding in a wide range of subjects.

The impact of this broad, exciting and challenging curriculum is to inspire and motivate the young people in our care to become lifelong learners. We also provide a Christian community to enable all to value faith. All pupils are encouraged to be proud of their own culture, religion and language and show respect to those of others.

Introduction

The Computing Curriculum for 2014 states that '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.'

Children need to be shown how to access all forms of Computing confidently to sufficiently prepare them for adulthood. Moreover, as children often already use Computing in their lives outside of school, technology provides the opportunity for relevant and accessible learning experiences that truly enrich the lives of pupils. Computing proves a highly motivating subject for many learners, both as an isolated subject and when used discretely in other areas of the curriculum.

Main aims for the teaching of Computing

Computing has become part of the way in which we all work and entertain ourselves. Almost everything we do at school now involves the use of computing:

- online lesson research, teaching plans and resource materials.
- lesson delivery via either an interactive whiteboard, visualiser, or iPads
- communication by e-mail and fax.
- document distribution and storage.
- assessment information analysis.
- production and editing of reports.

Thus, through teaching Computing, we equip children to participate in a world of rapidly changing technology. We enable them to find, explore, analyse, exchange and present information. We also help them to develop the necessary skills for using information in a discriminating and effective way. This is a major part of enabling children to be confident, creative and independent learners.

Our objectives in the teaching of Computing are:

- to develop logical thinking and reasoning
- to facilitate the finding, selection and use of information.
- to teach the use of Computing for effective and appropriate communication.
- to enable the monitoring and control of events, both real and imaginary.
- to teach the application of Computing to children's learning across the curriculum.
- to explore the value of Computing, both to children and to society in general.
- to develop an understanding of issues of security, personal safety, confidentiality, and accuracy.
- to develop the cross-curricular use of Computing in all subjects.

Teaching and learning style

As an objective of teaching of Computing is to equip children with the technological skill to become independent learners, the teaching style that we adopt is as active and practical as possible. While, at times, we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in Computing is for individuals or groups of children to use computers to help them to progress in whatever they are studying. So, for example, children might research a history topic by using role-play software that engages them in a highly visual way, or they might place themselves in a historical setting by manipulating a digital photograph, or they might investigate a particular issue on the Internet.

We recognise that all classes have children with a wide range of Computing abilities. This is especially true when some children have access to Computing equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways:

- setting tasks which are open-ended and can have a variety of responses
- setting tasks of increasing difficulty (not all children complete all tasks)

- sometimes grouping children by ability in the room, and setting different tasks for each ability group
- providing resources of different complexity that are matched to the ability of the child
- using classroom assistants to support the work of individual children or groups of children.

Computing curriculum planning

The school uses the BGFL (J2E) scheme of work for Computing as the basis for its curriculum planning. This fits with the new curriculum expectations and provides continuity.

We carry out the curriculum planning in Computing in three phases (long-term, medium-term and short-term). The long-term plan maps the Computing topics that the children study in each term during each key stage. The Computing subject leader devises this in conjunction with teaching colleagues in each year group, and the children often study Computing as part of their work in other subject areas.

Our long-term Computing plan shows how teaching units are distributed across the year groups, and how these fit together to ensure progression within the curriculum plan.

Our medium-term plans, which we have adopted from the BGFL (J2E) scheme of work, give details of each unit of work for each term. They identify the key learning objectives for each unit of work and stipulate the curriculum time that we devote to it. The Computing subject leader is responsible for keeping and reviewing these plans.

The class teacher is responsible for writing the short-term plans with the Computing component of each lesson. These daily plans list the specific learning objectives and expected outcomes for each lesson. The class teacher adapts individual plans and s/he and the Computing subject leader discuss them on an informal basis, to match the ability in each class.

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

The Foundation Stage

We teach Computing in reception classes as an integral part of the topic work covered during the year. As the reception class is part of the Foundation Stage of the National Curriculum, we relate the Computing aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) which underpin the curriculum planning for children aged three to five. The children have the opportunity to use the computers, a digital camera, a floor robot and iPads. Then, during the year, they gain confidence and start using the computer to find out information and to communicate in a variety of ways.

The contribution of Computing to teaching in other curriculum areas

The teaching of Computing contributes to teaching and learning in all curriculum areas. It also offers ways of impacting on learning which are not possible with conventional methods. Teachers use software to present information visually, dynamically and interactively, so that children understand concepts more quickly. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, while role-play simulations and the Internet prove very useful for research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way. Much of the software we use is generic and can therefore be used in several curriculum areas.

English

Computing is a major contributor to the teaching of English. Children's reading development is supported through talking stories. As the children develop mouse and keyboard skills, they learn how to edit and revise text on a computer. They have the opportunity to develop their writing skills by communicating with people via e-mail, and they are able to join in discussions with other children throughout the world through the medium of video conferencing. They also learn how to improve the presentation of their work by using desktop publishing software. There is in addition a variety of software which targets specific reading, grammar and spelling skills.

Mathematics

Children can use Computing in mathematics to collect data, make predictions, analyse results, and present information graphically. Screen robots allow pupils to give exact instructions for a particular route, or to use their knowledge of angles to draw a range of polygons. We use an increasing range of Apps and software in class learning.

Science

Software is used to animate and model scientific concepts, and to allow children to investigate processes which it would be impracticable to do directly in the classroom.

Personal, social and health education (PSHE) and citizenship

Computing contributes to the teaching of PSHE and citizenship in that children in Computing classes learn to work together in a collaborative manner. They also develop a sense of global citizenship by using the Internet and e-mail. Through discussion of e-safety and other issues related to electronic communication, the children develop their own view about the use and misuse of Computing, and they also gain an insight into the interdependence of Computing users around the world. We work during whole school e- safety week and take part in Safer Internet Day (SID).

Computing and Inclusion

At our school, we teach Computing to all children, whatever their ability and individual needs. Computing forms part of the school curriculum policy to provide 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 hard 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 separate policies: Special Educational Needs; Disability Discrimination; Gifted and Talented Children; English as an Additional Language (EAL).

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style, differentiation – so that we can take some additional or different action to enable the child to learn more effectively (e.g. a lot of software can be differently configured for different ability ranges). Assessing progress against the National Curriculum levels of expectation allows us to evaluate each child's progress against expected levels. This ensures that our teaching is matched to the child's needs.

Assessment for Learning

Teachers will assess children's work in Computing by making informal judgements during lessons. On completion of a piece of work, the teacher assesses the work, and uses this assessment to plan for future learning. Written or verbal feedback is given to the child to help guide his/her progress. Older children are encouraged to make judgements about how they can improve their own work, particularly through self/peer evaluation.

The subject leader keeps samples of the children's work in their portfolio. This demonstrates the expected level of achievement in Computing for each age group in the school.

Resources

We employ a technician to keep our equipment in good working order. Members of staff report faults in the book provided for that purpose in the Computing suite. The technician will also set up new equipment and install software and peripherals.

There are a number of government-provided laptops which are on loan to particular teachers. Class teachers have an iPad for school use only. They can be used for many applications and can be checked by the SLT at any time.

To keep our school computers virus-free, no software from home will be installed on school computers.

Monitoring and review

The coordination and planning of the Computing curriculum are the responsibility of the subject leader, who also:

- supports colleagues in their teaching, by keeping informed about current developments in Computing and by providing a strategic lead and direction for this subject.
- gives the headteacher an annual summary report in which s/he evaluates the strengths and weaknesses in Computing and indicates areas for further improvement.

- uses specially allocated regular management time to review evidence of the children's work, and to observe Computing lessons across the school.
- The quality of teaching and learning in Computing is monitored and evaluated by the headteacher as part of the school's agreed cycle of lesson observations.

The Computing policy and its implementation will be reviewed annually.

Reviewed September 2022
R. Jones