ST THOMAS MORE CATHOLIC FIRST SCHOOL

Learning, loving and living together with Christ

COMPUTING POLICY

"Computers are now part of everyday life. For most of us, technology is essential to our lives, at home and at work. 'Computational thinking' is a skill children must be taught if they are to be ready for the workplace and able to participate effectively in this digital world. The new National Curriculum for computing has been developed to equipment young people in England with the foundational skills, knowledge an understanding of computing they will need for the rest of their lives. Through the new programme of study for computing, they will learn how computers and computer systems work, they will design and build programmes and develop their ideas using technology and create a range of content." (NAACE, 2013, Forward)

INTRODUCTION

Document Purpose

This policy reflects the values and philosophy of St Thomas More Catholic First School in relation to the teaching and learning of Computing. It sets out a framework within which teaching and non-teaching staff can operate, and gives guidance on planning, teaching and assessment.

This policy should be read in conjunction with the National Curriculum for Computing (2014) which sets out specific teaching objectives for children in different classes and year groups. The school constantly adapts this document to suit the specific requirements of the children and the resources available.

Overall Aims for Information Communication Technology:

At St Thomas More Catholic First School we aim:

- To be consistent with our School Mission Statement.
- To ensure that teachers and pupils can access ICT resources and the range of locations that provide access. Access in this context applies to both curriculum and administration resources and, when reviewing the school's position, account will need to be taken of the way in which both pupils and staff are able to access ICT.
- To follow the National Curriculum for Computing.
- To provide and ensure safeguards in relation to children's access to information across the Internet following the schools Acceptable Use Policy and with the support of CEOP (Child Exploitation and Online Protection) materials and other suitable materials.
- To develop deeper learning throughout the curriculum through the use of technology. All children will be given the opportunity to take control of their learning.
- To discuss and demonstrate the purpose for which they will use technology, embedding and using the skills they have learnt to ensure progression.
- The children have regular opportunities to develop their ICT skills across the key stages by engaging in challenging tasks and problem solving that allow them to apply their ICT capabilities creatively, confidently and independently, developing computational thinking.
- To ensure that children with special educational needs, including gifted and talented children may participate fully, with suitable challenge and achieve to their full potential.

- To create an environment which supports the development of children as active learners and to cultivate an understanding of the skills and processes of the appropriate use if technology.
- To monitor and evaluate the quality of the professional development for computing, and the impact it has on the outcomes for learning and teaching and staff professional roles, giving opportunities for extending learning with computing beyond the school.
- To explore the range and quality of the provision that the school makes for staff ICT development and how it supports individuals and shares effective practice.
- To provide pupils with an educational basis of understanding of technology and its uses as a 'life-skill'.

Computing Capability

The Computing National Curriculum 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.

The Early Years Foundation Stage (EYFS) aim is that children recognize that a range of technology is used in places such as homes and schools and that they select and use technology for particular purposes.

Computing capability is characterised by an ability to use technology effectively as stated above.

At St Thomas More Catholic First School this therefore involves pupils using a range of technology to aid in problem solving, supporting learning across the whole curriculum whilst also understanding the implications of technology usage in everyday working life and society. Throughout Key Stage 1 and Key Stage 2 children at St Thomas More Catholic First School will develop an understanding of, and a competence to use increasingly challenging skills. This will include the development of capabilities to determine when and how to use technology appropriately.

At St Thomas More Catholic First School our children work at levels appropriate to their abilities. It is expected that most children will achieve *at least* the Key stage 1 objectives stated below by the age of 7 and *at least* the Key stage 2 objectives by the age of 9.

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

Reviewing, modifying and evaluating work

At all times we will review our work critically, to explore how the use of technology has impacted on the quality. We will look at examples of technology being used effectively, such as on websites or meetings with our cluster schools. Our professional discussions will impact on planning of the curriculum, teaching and learning.

The Role of the Computing Co-Ordinator

The coordinator for computing is Mr A Reeves. The computing co-ordinator and Senior Leadership Team have the main overall responsibility for issues involving the purchasing of ICT hardware and software. This will be determined in relation to our current school development plan and the current emphasis and priority of the subject. Currently within St Thomas More Catholic First School we see computing as a major priority for development.

The computing co-ordinator will, in conjunction with the Senior Leadership Team, be responsible for the maintenance of this policy which will be used as a basis to inform our own usage of technology. This will involve liaising with appropriate external bodies.

The co-ordinator will help to oversee issues relating to planning, staff training and delivery of INSET.

The computing co-ordinator will have a record of hardware and software. The software and hardware facilities available in School, will be regularly reviewed by the co-ordinator in consultation with other members of staff and our technical support team.

Systems and Security

Our aim at St Thomas More Catholic First School is to make all systems include the same software for each area to aid continuity and progression through our developing computing scheme of work. We aim to promote the usage of operating systems that are commonplace in middle, high schools and industry to promote continuity and progression of our delivery of computing education into everyday life. Wherever possible, children will use applications available to them via the Internet at home / outside school.

Security of our systems within school is protected by means of recording all new and existing systems within the school equipment log book. The use of Sophos antivirus and Policy Central help maintain the safety on the internet. Computers are also physically marked with or security case etching.

Movement of stand alone around school is discouraged, due to potential for damage. Advice should be sought from the computing coordinator on proposed changes of location.

Resources

Resources are kept in classrooms and some are centrally stored on the shelves in the school reading area.

Interactive white boards (IAWB) are in all classrooms and access to the internet is available. DVDs can be used on IAWB and photographs from digital cameras and iPads / iPods can be shown for all children to see.

Planning and Teaching

Subject planning and evaluation at St Thomas More Catholic First School is at class level in the short-term, between classes within a key stage in the medium-term, and at a whole school level in the long-term.

The use of technology is integrated into all relevant subject areas. Each member of staff will be responsible for planning the use of technology within their lessons.

This will include differentiation in expectation, by task, questioning, by support and learning outcomes, allowing the class to work together at different levels.

At St Thomas More Catholic First School the scheme of work is organised in terms of year groups and in key stages, with provision for Personal Learning Plans. Computing is organised by its

integration into all curriculum areas. Computing will be taught through a combination of individual, class and various groupings and according to the learning objectives. The children experience the use of technology every day, where it will have an impact on the learning. Some lessons will be implicit computing lessons developing skills as outlined in the school long and medium term plans. Other learning will take place as children use and develop skills whilst working in other subjects.

All teachers at St Thomas More Catholic First School will be given every opportunity to develop their computing skills through relevant training sessions.

Health and Safety

At St Thomas More Catholic First School, we recognise the importance of health and safety issues for all in regard to the use of computers and related equipment, both in and outside of the classroom. As such, computers are placed on trolleys/low tables/computer workstations at the correct and appropriate height and position for the children in the classroom. It is important to adjust the position of seating and monitors appropriately to suit the user at all times, to avoid potential strain related injuries.

Technology should be in a position to allow staff to monitor safe usage as they would do with all electrical hardware.

Technician Input

Teachers are responsible for ensuring that the hardware and software are used correctly and safely on a day-to-day basis. Any problems should be ticketed by email to our support team, which is kept in the front office. Machines should not be moved, disconnected or exchanged without prior consultation with the computing co-ordinator and the Health and Safety representative.

In line with the Electricity at Work Regulations 1989, all computers in St Thomas More Catholic First School will be tested to ensure they are compatible with these regulations. This is normally achieved by a formal electrical safety inspection every 12 months and a visual inspection every 4 months.

Copyright

All copyright legislation is abided by. If a member of staff is unsure about the legality of software, please check with the Computing Co-Ordinator or Computing Technician. The Computing Co-Ordinator accepts no responsibility for illegal copying of software by other staff members.

Within Key Stage 2, children are taught about copyright as part of developing their e-literacy skills.

Special Needs

Technology should be implemented in accordance with any Personal Learning Plan where required. As with all other curriculum areas, material may be selected from earlier or later parts of the key stage scheme of work as appropriate, where this is necessary and suitable, to enable pupils to progress and demonstrate achievement. Such materials should be presented in a

context appropriate for the age and maturity of the pupil. External agencies also provide guidance and resources.

Equal Opportunities

At St Thomas More Catholic First School we seek to ensure appropriate and equal access to technology for all children regardless of age, gender, ethnicity or ability. We deem 'appropriate' to mean that which is educationally beneficial to our children. Access to certain resources will be deliberately restricted, especially in relation to the access of certain materials on the Internet.

Recording and Assessment

At St Thomas More Catholic First School, children are to be assessed against the age appropriate outcomes expected in the National Curriculum. As computing can be cross-curricular, care will be taken to assess and record specific computing achievements, rather than the success or otherwise of the subject through which computing is being taught. Reporting will be based on the objectives from the National Curriculum.

The date of this policy is March 2015 and it will be reviewed in March 2016.

ST THOMAS MORE CATHOLIC FIRST SCHOOL

Learning, loving and living together with Christ

COMPUTING POLICY

"Computers are now part of everyday life. For most of us, technology is essential to our lives, at home and at work. 'Computational thinking' is a skill children must be taught if they are to be ready for the workplace and able to participate effectively in this digital world. The new National Curriculum for computing has been developed to equipment young people in England with the foundational skills, knowledge an understanding of computing they will need for the rest of their lives. Through the new programme of study for computing, they will learn how computers and computer systems work, they will design and build programmes and develop their ideas using technology and create a range of content." (NAACE, 2013, Forward)

INTRODUCTION

Document Purpose

This policy reflects the values and philosophy of St Thomas More Catholic First School in relation to the teaching and learning of Computing. It sets out a framework within which teaching and non-teaching staff can operate, and gives guidance on planning, teaching and assessment.

This policy should be read in conjunction with the National Curriculum for Computing (2014) which sets out specific teaching objectives for children in different classes and year groups. The school constantly adapts this document to suit the specific requirements of the children and the resources available.

Overall Aims for Information Communication Technology:

At St Thomas More Catholic First School we aim:

- To be consistent with our School Mission Statement.
- To ensure that teachers and pupils can access ICT resources and the range of locations that provide access. Access in this context applies to both curriculum and administration resources and, when reviewing the school's position, account will need to be taken of the way in which both pupils and staff are able to access ICT.
- To follow the National Curriculum for Computing.
- To provide and ensure safeguards in relation to children's access to information across the Internet following the schools Acceptable Use Policy and with the support of CEOP (Child Exploitation and Online Protection) materials and other suitable materials.
- To develop deeper learning throughout the curriculum through the use of technology. All children will be given the opportunity to take control of their learning.
- To discuss and demonstrate the purpose for which they will use technology, embedding and using the skills they have learnt to ensure progression.
- The children have regular opportunities to develop their ICT skills across the key stages by engaging in challenging tasks and problem solving that allow them to apply their ICT capabilities creatively, confidently and independently, developing computational thinking.
- To ensure that children with special educational needs, including gifted and talented children may participate fully, with suitable challenge and achieve to their full potential.

- To create an environment which supports the development of children as active learners and to cultivate an understanding of the skills and processes of the appropriate use if technology.
- To monitor and evaluate the quality of the professional development for computing, and the impact it has on the outcomes for learning and teaching and staff professional roles, giving opportunities for extending learning with computing beyond the school.
- To explore the range and quality of the provision that the school makes for staff ICT development and how it supports individuals and shares effective practice.
- To provide pupils with an educational basis of understanding of technology and its uses as a 'life-skill'.

Computing Capability

The Computing National Curriculum 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.

The Early Years Foundation Stage (EYFS) aim is that children recognize that a range of technology is used in places such as homes and schools and that they select and use technology for particular purposes.

Computing capability is characterised by an ability to use technology effectively as stated above.

At St Thomas More Catholic First School this therefore involves pupils using a range of technology to aid in problem solving, supporting learning across the whole curriculum whilst also understanding the implications of technology usage in everyday working life and society. Throughout Key Stage 1 and Key Stage 2 children at St Thomas More Catholic First School will develop an understanding of, and a competence to use increasingly challenging skills. This will include the development of capabilities to determine when and how to use technology appropriately.

At St Thomas More Catholic First School our children work at levels appropriate to their abilities. It is expected that most children will achieve *at least* the Key stage 1 objectives stated below by the age of 7 and *at least* the Key stage 2 objectives by the age of 9.

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

Reviewing, modifying and evaluating work

At all times we will review our work critically, to explore how the use of technology has impacted on the quality. We will look at examples of technology being used effectively, such as on websites or meetings with our cluster schools. Our professional discussions will impact on planning of the curriculum, teaching and learning.

The Role of the Computing Co-Ordinator

The coordinator for computing is Mr A Reeves. The computing co-ordinator and Senior Leadership Team have the main overall responsibility for issues involving the purchasing of ICT hardware and software. This will be determined in relation to our current school development plan and the current emphasis and priority of the subject. Currently within St Thomas More Catholic First School we see computing as a major priority for development.

The computing co-ordinator will, in conjunction with the Senior Leadership Team, be responsible for the maintenance of this policy which will be used as a basis to inform our own usage of technology. This will involve liaising with appropriate external bodies.

The co-ordinator will help to oversee issues relating to planning, staff training and delivery of INSET.

The computing co-ordinator will have a record of hardware and software. The software and hardware facilities available in School, will be regularly reviewed by the co-ordinator in consultation with other members of staff and our technical support team.

Systems and Security

Our aim at St Thomas More Catholic First School is to make all systems include the same software for each area to aid continuity and progression through our developing computing scheme of work. We aim to promote the usage of operating systems that are commonplace in middle, high schools and industry to promote continuity and progression of our delivery of computing education into everyday life. Wherever possible, children will use applications available to them via the Internet at home / outside school.

Security of our systems within school is protected by means of recording all new and existing systems within the school equipment log book. The use of Sophos antivirus and Policy Central help maintain the safety on the internet. Computers are also physically marked with or security case etching.

Movement of stand alone around school is discouraged, due to potential for damage. Advice should be sought from the computing coordinator on proposed changes of location.

Resources

Resources are kept in classrooms and some are centrally stored on the shelves in the school reading area.

Interactive white boards (IAWB) are in all classrooms and access to the internet is available. DVDs can be used on IAWB and photographs from digital cameras and iPads / iPods can be shown for all children to see.

Planning and Teaching

Subject planning and evaluation at St Thomas More Catholic First School is at class level in the short-term, between classes within a key stage in the medium-term, and at a whole school level in the long-term.

The use of technology is integrated into all relevant subject areas. Each member of staff will be responsible for planning the use of technology within their lessons.

This will include differentiation in expectation, by task, questioning, by support and learning outcomes, allowing the class to work together at different levels.

At St Thomas More Catholic First School the scheme of work is organised in terms of year groups and in key stages, with provision for Personal Learning Plans. Computing is organised by its

integration into all curriculum areas. Computing will be taught through a combination of individual, class and various groupings and according to the learning objectives. The children experience the use of technology every day, where it will have an impact on the learning. Some lessons will be implicit computing lessons developing skills as outlined in the school long and medium term plans. Other learning will take place as children use and develop skills whilst working in other subjects.

All teachers at St Thomas More Catholic First School will be given every opportunity to develop their computing skills through relevant training sessions.

Health and Safety

At St Thomas More Catholic First School, we recognise the importance of health and safety issues for all in regard to the use of computers and related equipment, both in and outside of the classroom. As such, computers are placed on trolleys/low tables/computer workstations at the correct and appropriate height and position for the children in the classroom. It is important to adjust the position of seating and monitors appropriately to suit the user at all times, to avoid potential strain related injuries.

Technology should be in a position to allow staff to monitor safe usage as they would do with all electrical hardware.

Technician Input

Teachers are responsible for ensuring that the hardware and software are used correctly and safely on a day-to-day basis. Any problems should be ticketed by email to our support team, which is kept in the front office. Machines should not be moved, disconnected or exchanged without prior consultation with the computing co-ordinator and the Health and Safety representative.

In line with the Electricity at Work Regulations 1989, all computers in St Thomas More Catholic First School will be tested to ensure they are compatible with these regulations. This is normally achieved by a formal electrical safety inspection every 12 months and a visual inspection every 4 months.

Copyright

All copyright legislation is abided by. If a member of staff is unsure about the legality of software, please check with the Computing Co-Ordinator or Computing Technician. The Computing Co-Ordinator accepts no responsibility for illegal copying of software by other staff members.

Within Key Stage 2, children are taught about copyright as part of developing their e-literacy skills.

Special Needs

Technology should be implemented in accordance with any Personal Learning Plan where required. As with all other curriculum areas, material may be selected from earlier or later parts of the key stage scheme of work as appropriate, where this is necessary and suitable, to enable pupils to progress and demonstrate achievement. Such materials should be presented in a

context appropriate for the age and maturity of the pupil. External agencies also provide guidance and resources.

Equal Opportunities

At St Thomas More Catholic First School we seek to ensure appropriate and equal access to technology for all children regardless of age, gender, ethnicity or ability. We deem 'appropriate' to mean that which is educationally beneficial to our children. Access to certain resources will be deliberately restricted, especially in relation to the access of certain materials on the Internet.

Recording and Assessment

At St Thomas More Catholic First School, children are to be assessed against the age appropriate outcomes expected in the National Curriculum. As computing can be cross-curricular, care will be taken to assess and record specific computing achievements, rather than the success or otherwise of the subject through which computing is being taught. Reporting will be based on the objectives from the National Curriculum.

The date of this policy is March 2015 and it will be reviewed in March 2016.