Holy Trinity Roman Catholic Academy Boundary Road Newark NG24 4AU

COMPUTING POLICY

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POLICIES & PROCEDURES
DOCUMENT CONTROL SYSTEM

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Holy Trinity Catholic Voluntary Academy Mission Statement

"In every child there is a space only God can fill"

St Thomas Aquinas

At our school we continually strive to develop the full potential of the school community in an environment permeated by the Catholic Faith and promoting Gospel values.

At the heart of our mission is the family, school and parish, each supporting and working in mutual co-operation for the benefit of the children.

We are seeking to enrich the lives entrusted to our care through a broad and balanced curriculum designed to meet the needs of each pupil.

The school provides opportunities for young children to develop spiritually, morally, intellectually, physically and emotionally, and share their qualities, abilities and ambitions thus fulfilling individual potential.

As a worshipping community we respect all people and create a loving, caring atmosphere which overflows into an ethos of warmth and welcome towards parents, parish and the local community

Holy Trinity Catholic Academy

Computing Policy

Introduction
The use of information and communication technology is an integral part of the National Curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Holy Trinity Catholic Academy, we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively. The purpose ofthis policy is to state how the school intends to make this provision.

Aims
The school's aims are to:
- Meet the requirements of the National Curriculum programme of study for computing.
- Provide a relevant, challenging and enjoyable curriculum for computing for all pupils.
- Use ICT and computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use ICT and computing throughout their later life.
- 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.

Computing Curriculum Intent:

Curriculum Implementation:
Objectives

Early Years
It is important in the Foundation Stage to give children a broad, play-based experience of Computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature Computing scenarios based on experience in the real world;, such as role play. Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recordingdevices can support children to develop their communication skills. This is particularly 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 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.

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.

Planning
Modules are planned in line with the National Curriculum. Medium term plans are designed to enable pupils to achieve stated objectives, allowing for clear progression as they move up the school.

The Medium Term plan is organised as follows:

Advent Term:
During the advent term all children in school will be focusing on the Digital Literacy area of the computing curriculum. In Foundation stage all children will recognise inappropriate content and know when to tell an adult. In Key Stage One, all children will be able to identify rules for safe internet usage, understand what personal information is and the need to keep it private. Moving into Lower Key Stage 2, all children will be able to understand when personal information needs to be shared and when it should not and understand that games/films have age ratings and can explain those. In Upper Key Stage 2, all children will be able to understand what makes a strong

password and why this is important in the wider world and understand that algorithms are used to track online activities with a view to targeting advertisement and information.

<mark>E-Safety is then recalled upon throughout the year through 'e-safety' starter sessions within computing lessons across the school.</mark>

Further information on what is covered in Digital Literacy is available on our school website in the Computing Medium Term Planner.

Lent Term:

During the lent term, all children in school focus on the Information Technology aspect of the computing curriculum. The children in school will use a range of digital devices to fulfil the curriculum, from iPads, Laptops and Desktop Computers. In Foundation stage all children will be using a computer and understanding the basic parts of a computer. Once familiar with this they will create a piece of digital art using a piece of the school's IT software. In Key Stage 1, the children will build on their prior knowledge by collecting data in the classroom and using this to create content on the computer. They will also begin to create presentations on a topic by combining images, video or sound when presenting to the class. In Lower Key Stage 2, all children will learn to type using all fingers and learn some key board shortcuts, such as ctrl+c and ctrl+v for copy and paste. In Upper Key Stage 2, all children will recognise file types and have an awareness of a range of internet services. The children will also be able to draw conclusions from data presented in a digital form.

Further information on what is covered in Information Technology is available on our school website in the Computing Medium Term Planner.

Pentecost Term:

During the Pentecost term, all children in school will be focusing on the Computer Science aspect of the computing curriculum. In Foundation Stage the children will begin by understanding that we control computers and write a short set of instructions for controlling a device. In Key Stage 1, all children will be shown how to decompose a problem into smaller steps to make it simpler before creating a short algorithm using repetition that can be programmed into a BeeBot or into Scratch Junior. In Lower Key Stage 2, all children will develop their knowledge from Foundation Stage and Key Stage 1 by adding forever loops into repetition and using selection codes in Scratch Junior and Scratch. In Upper Key Stage 2, the children will begin adding variables into their codes and create a fully working game on Scratch.

Further information on what is covered in Computer Science is available on our school website in the Computing Medium Term Planner.

<u>Resources</u>

We have a range of laptops, ipads and a ICT suite containing desktop computers which are timetabled throughout the week for use by all children.

Computers around the school are networked and have Internet access. Interactive Whiteboards are available for all children to access daily.

<u>Online resources for home use</u>

We use a variety of resources to support home learning. These include IXL, TT Rockstars, Kahoot, Oxford Owl

Pupils have passwords that can be used to access these sites. Pupils have been shown how to use them and how to keep their passwords safe from others.

Computing Technicians
The school uses Atom IT to provide technical support and an IT Technician. This support takes a variety of forms, including:
- dealing with technical queries relating to software and hardware;
- carrying out rudimentary and routine maintenance and repairs of hardware ;
- purchasing and updating equipment;
- supporting teachers in the use of ICT in other curriculum areas;
- supporting admin staff with the use of ICT within their roles;

Curriculum Impact:

Assessment
Key objectives to be assessed are taken from the National Curriculum. Teachers regularly assess capability through observations, discussions with pupils and looking at completed work. Regular assessment of computing work is an integral part of teaching and learning and central to good practice. It should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of the concepts of ICT and computing. We assess the children's work in computing by making informal judgements as we observe and talk to the children during lessons

Inclusion
At Holy Trinity Academy, we teach computing to all children, whatever their ability, age, gender or race. Computing forms part of our school curriculum policy to provide a broad and balanced education for all children.

We provide learning opportunities that are matched to the specific needs of children with learning difficulties. In some instances the use of ICT has a considerable impact on the quality of work that children produce; it increases their confidence and motivation and allows access to parts of the curriculum to which the children would otherwise not have had.

Roles and Responsibilities

Computing Subject Leader
The subject leader is responsible for providing professional leadership and management of computing within the school.

The monitoring of the standards of the children's work and of the quality of teaching in computing is the responsibility of the computing subject leader. The computing subject leader is also responsible for supporting colleagues in the teaching of computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the

subject in the school.

They will monitor standards to ensure high quality teaching, effective use of resources and improved standards of learning and achievement. They will collect, analyse and distribute, where applicable, information relating to the subject to the relevant people.

Class Teachers
It is the responsibility of each class teacher to ensure that their class is taught all elements of the computing curriculum as set out in the Medium Term plans based on the National Curriculum programme of study.

All staff
It is the responsibility of all staff to make themselves aware of legislation relating to the use of ICT and computing, including copyright and data protection issues *(see E-Safety Policy including acceptable use policy and GDPR Policy).*

Governors
The Local Governing Body monitor and review this policy every two years.