Computing Policy

September 2020

MISSION STATEMENT

Corpus Christi Catholic School is a welcoming, vibrant and diverse community with the Christian values of respect, equality and love for all at its core.

We aim to nurture, motivate, educate and to inspire all children to become lifelong learners and to achieve the best that they can.

Following the example of Jesus, we uphold our school motto:
To Learn, To Live, To Love.

Discere Vivere Amare

POLICY STATEMENT

Computing

Date	Review Date	Subject Leader	Nominated Governor
September 2020	September 2021	Rachel Kriechbaum	Miranda Sawyer

Computing is a broad and wide ranging subject that has an impact across all curriculum subjects and all key stages. This document outlines our school's policy for the delivery and management of the computing curriculum.

We believe that 'computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and 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.' (The National Curriculum in England Framework Document (DfE) 2014)

At Corpus Christi School the study of computing enables the children to expand their knowledge, understanding, experience and skills in a subject which is very relevant in an increasingly 'technology dependent' world. The children are actively involved in investigating, manipulating, coding and debugging information in a variety of forms including text, symbols, sound, graphics, photographs, music, film and animation.

Alongside this, Corpus Christi school is aware of the vital role computing has in educating children about the need to stay safe whilst using computers, the Internet and social media. The school will actively engage children, staff, parents and governors in appropriate e-safety training. This will give all users the confidence to deal appropriately with any problems or concerns they might encounter whilst online.

We are also very aware of our duty to safeguard children, young people and families from violent extremism. We are aware that there are extremists groups within our country who wish to radicalise vulnerable children and to involve them in terrorism or in activity in support of terrorism. Periodic risk assessments are undertaken to assess the risk of pupils being drawn into terrorism. School personnel must be aware of the increased risk of online radicalisation, and alert to changes in pupil's behaviour. Any concerns will be reported to the Designated Safeguarding Lead.

We are aware that under the 'Counter-Terrorism and Security Act 2015' we have the duty to have 'due regard to the need to prevent people from being drawn into terrorism'. This duty is known as the Prevent duty and we believe it is essential that school personnel are able to identify those who may be vulnerable to radicalisation or being influenced by extremist views, and then to know what to do when they are identified.

We provide a safe environment where we promote pupils' welfare. Within this environment we work hard to build pupils' resilience to radicalisation and extremism by promoting fundamental British values and for everyone to understand the risks associated with terrorism. We want pupils to develop their knowledge and skills in order to challenge extremist views.

We understand that is our duty under the statutory guidance on the Prevent duty to have in place a risk assessment, a working partnership with the Local Safeguarding Children Boards (LSCBs), training school personnel and IT policies.

Intent:

At our school we want pupils to be masters of technology and not slaves to it. Technology is everywhere and will play a pivotal part in students' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want our pupils to be creators not consumers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this. . We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology to model positive use. We recognise that the best prevention for a lot of issues we currently see with technology/social media is through education. We recognise that technology can allow pupils to share their learning in creative ways. We also understand the accessibility opportunities technology can provide for our pupils. Our knowledge rich curriculum must be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists.

Implementation:

Teachers at Corpus Christi follow a comprehensive progression document which covers all three strands of the Computing Curriculum. Using this document allows staff to embed and cover every element of the computing curriculum. The knowledge/skills statements build year on year to deepen and challenge our learners.

Impact:

We encourage our children to enjoy and value the curriculum we deliver. We will constantly ask the WHY behind their learning and not just the HOW. We want learners to discuss, reflect and appreciate the impact computing has on their learning, development and well-being. Finding the right balance with technology is key to an effective education and a healthy life-style. We feel the way we implement computing helps children realise the need for the right balance and one they can continue to build on in their next stage of education and beyond. We encourage regular discussions between staff and pupils to best embed and understand this. The way pupils showcase, share, celebrate and publish their work will best show the impact of our curriculum. We also look for evidence through reviewing pupil's knowledge and skills digitally through tools like Google Drive and Scratch and observing learning regularly. Progress of our computing curriculum is demonstrated through outcomes and the record of coverage in the process of achieving these outcomes.

CURRICULUM AIMS AND OBJECTIVES:

Aims

The aims of the computing curriculum are to enable children to:

- To ensure that all pupils can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- To ensure that all pupils can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- Develop a capability to find, select and use information appropriately
- Use computing for effective and appropriate communication
- Monitor and control events both real and imaginary
- Use hardware and software to develop creative and appropriate uses of information.
- Apply their computing skills and knowledge to their learning across the curriculum
- Use their computing skills to develop their language and communication skills
- Explore their attitudes towards computing and its value to them and society in general. For example, to learn about issues of security, confidentiality and accuracy of information
- Be aware of e-safety and the appropriate use of the Internet and social media
- Understand the need to protect themselves and their personal information whilst using the Internet

- Have the confidence to tackle any worries or concerns they have and know who they can turn to for help and advice
- To promote the teaching of numeracy and literacy within all subjects.
- To protect children from the risk of radicalisation and extremism.
- To ensure compliance with all relevant legislation connected to this policy.

<u>The Subject Leader will:</u>

- Lead the development of this policy throughout the school;
- work closely with the Headteacher, the nominated governor and SENCO;
- be accountable for standards in this subject area;
- monitor standards by;

  - auditing the subject area
  - review of the scheme of work
  - monitoring teachers planning
  - lesson observations
  - scrutinising children's work
  - discussions with pupils
  - ensure continuity and progression throughout the school;

- devise a subject improvement plan;
- provide guidance and support to all staff;
- provide training for all staff on induction and when the need arises regarding;
- attend appropriate and relevant INSET;
- keep up to date with new developments;
- undertake an annual audit and stock take of resources;
- purchase new resources when required and in preparation for the new academic year;
- manage the subject budget effectively;
- undertake risk assessments when required;
- review and monitor;
- annually report to the Governing Body on the success and development of this policy

ORGANISATION AND PLANNING

Curriculum Organisation

During the Early Years and Key Stage 1, pupils explore computing and learn to use it confidently and with purpose to achieve specific outcomes. They start to use computing to develop their ideas and record their creative work. They become familiar with hardware and software. They begin to develop their coding skills.

During Key Stage 2, pupils use a wider range of computing tools and information sources to support their work in other subjects. They develop their research skills and decide what information is appropriate for their work. They begin to question the plausibility and quality of information. They learn how to amend their work and present it in a way that suits its audience. The further develop their understanding of coding languages and explore how debugging can help solve errors and make improvements.

All of the computing work is based upon the key strands as set out in the computing programme of study:

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.

Foundation Stage

Within the foundation stage the children begin to develop their knowledge, skills and understanding of ICT through the 'Knowledge and Understanding of the World' (KUW) strand of the EYFS curriculum. As well as the allocated computer suite time the children are encouraged to develop their experience of technology through play and structured activities where they use a wide range of equipment such as tape recorders, digital cameras, control technology and the iPads. From the Nursery onwards the children are encouraged to begin developing their computer skills by using the mouse and keyboard.

Teaching and Learning Styles

All staff are strongly encouraged to make use of computing in every lesson across the primary curriculum. Although the children are taught specific skills in their computing lessons, they are encouraged to make use of these skills in other lessons and in their own learning. The computing coordinator works with the different subject coordinators to ensure that the most up to date and relevant resources are available across the curriculum in order to maximise the children's exposure to good quality lessons.

Planning

- **Long Term Planning**.
  The yearly programme provides an outline of the unit of work being studied each term for each year group and highlights the strand and software and packages that link directly to it. It is essential that each member of staff is aware of the strands and units of work being covered in their year group.
- **Medium Term Planning.**
  The computing work for a particular strand should be recorded on the medium term plans as a

unit of work lasting a term and refer to the long term plan for computing. Staff highlight and date when key objectives are taught as part of their units.

- **E-Safety**

    At least once every half term, each class is expected to devote one lesson to teaching e-safety, giving the children the opportunity to develop their confidence in this area and address any concerns that are raised. The school uses the 'Switched on Safety' scheme to help provide resources for these lessons.

Monitoring

Monitoring of standards of children's work and the quality of teaching is the responsibility of the subject coordinator supported by the Headteacher and the SLT.

Standards will be monitored by:

- looking at pupils work

- subject observations

- pupil discussions

The Computing Co-ordinator carries out a skills audit of a range of children throughout the school and monitors the progress that the children are making. Lesson observations take place to ensure that the key skills are being taught. The Computing Co-ordinator will also monitor how technology is being used across the wider curriculum.

Inclusion

All children, regardless of race, gender, ability or background should have equal access to the computing curriculum. In order for this to be achieved the following points should be considered:

- Teachers should teach their knowledge, skills and understanding in ways that suit their pupils' abilities
- When planning, teachers should set high expectations and provide opportunities for all pupils to achieve. We work hard to offer equality of opportunity and diversity to all groups of pupils within school such as children: from both sexes; who have Special Educational Needs; who are looked after; from minority faiths, ethnicities, travellers, asylum seekers, refugees; who are gifted and talented; who are at risk of disaffection; who are young carers; who are sick; who have behavioural, emotional and social needs; from families who are under stress
- Teachers should take specific action to respond to pupils' diverse needs by creating effective learning environments, securing motivation and concentration, making use of a range of teaching approaches and setting realistic targets.

Resources

The school has a 15 laptops and 30 chrome books which are used for specific computing lessons and can be booked for other lessons when available. These laptops are equipped with up to date computer science programmes and teachers are able to request new software to support the teaching of computing. The school has 30 iPads (15 each located in the Junior and Infant parts of the school),

together with the school-wide Wi-Fi network, teachers are encouraged to explore ways in which computing can be brought in to the class room through the use of good quality apps.

Each class has a networked computer attached to an interactive white board; they also have a class iPad and a class budget with an iTunes account to spend on quality apps relevant to their key stage and year group. All computers, laptops and iPads have access to the Internet and teachers are encouraged to make use of online resources appropriate to their lessons.

REMOTE LEARNING

Teachers in each year group will continue to use the high quality resources and planning used in teaching computing in school to support the remote teaching of computing. They will make use of online programmes such as 'An Hour of Code' and 'Scratch' online to support the computer science strands of the curriculum. Contingency plans are prepared in the event that remote learning is required.

Contingency plans will:
- Use a curriculum sequence that allows access to high-quality online and offline resources and teaching videos and that is linked to the school's curriculum expectations
- Give access to high quality remote education resources
- Make use of the online tools that are consistently used across the school in order to allow interaction, assessment and feedback to pupils
- Provide printed resources, such as textbooks and workbooks, for pupils who do not have suitable online access
- Be inclusive of SEND pupils and their families

MONITORING ARRANGEMENTS

Monitoring of standards of children's work and the quality of teaching is the responsibility of the subject coordinator supported by the Co-Headteachers and the Senior Leadership Team.

Standards will be monitored by:

- looking at pupils' work
- subject observations
- pupil discussions
- audit of subjects
- scrutiny of planning
- general curriculum discussions

INCLUSION

We believe that we are an educationally inclusive school as we are concerned about the teaching and learning, achievements, attitudes and well-being of all our pupils. We aim to provide places for all pupils who express a preference to join this school.

We work hard to offer equality of opportunity and diversity to all groups of pupils within school such as children:

- from both sexes;
- who have Special Educational Needs;
- who are looked after;
- from minority faiths, ethnicities, travelers, asylum seekers, refugees;

- who are gifted and talented;
- who are at risk of disaffection;
- who are young carers;
- who are sick;
- who have behavioural, emotional and social needs;
- from families who are under stress

We believe we have a duty to ensure that all children have equal rights to the opportunities offered by education and that all children will be encouraged to fulfil their potential in their academic, physical and creative achievements.

We want to give all children the right to access high quality educational experiences, to take part in a broad and balanced curriculum and to be part of the social life of the school.

We recognise that within the school we have more able, gifted and talented children. We believe that:

- more able children demonstrate a higher ability than average for the class and often require differentiated tasks and opportunities to learn through challenges;
- gifted children are those who have the ability to do well in more than one subject;
- talented children demonstrate an innate talent or skill in creative, cultural or sporting fields

We have an even greater obligation to plan and deliver well-structured lessons with appropriate assessment plus ambitious targets for pupils who have low levels of prior attainment or come from disadvantaged backgrounds.

Also, we have a duty to cater for pupils whose first language is not English by planning teaching opportunities to help them develop their English and to gain full access to the National Curriculum.

Confirmation of policy:

Corpus Christi School

Subject Lead: Miss R Kriechbaum

Link Governor: Ms M Sawyer

Date to be reviewed: September 2021