

**THE FEDERATION OF GUARDIAN ANGELS' AND
OUR LADY OF LOURDES RCPS
COMPUTING POLICY**

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Mission Statement

We follow in the footsteps of Jesus to love, learn and grow.

Our Own Grown Curriculum

Our own grown curriculum provides every child with a Catholic education based on the life and teachings of Jesus Christ in which our schools Mission Statement and the Gospel Values underpin all aspects of school life.

We recognise and celebrate that every child is made in the image and likeness of God. Our curriculum is inclusive and meets the needs of every child in our school.

We have grown a curriculum that is progressive and sequential, creative, challenging, fun and enriching. The curriculum provides every child with the knowledge, skills and experiences to become excellent lifelong learners and equip them to embrace the diverse and ever-changing world that we live in.

Purpose of this policy

This policy reflects the aims and values of The Federation of Guardian Angels' and Our Lady of Lourdes RCPS. It ensures all stakeholders, including staff, governors, parents and children, are working towards the same goals.

The purpose of this policy is to:

- Set out a framework for all teaching and non-teaching staff, giving guidance on planning, teaching and assessment
- Demonstrate adherence to the National Curriculum objectives and guidelines
- Provide clear information to parents and carers about what their children will be taught
- Allow the governing board to monitor the curriculum

Our Vision

Within the Federation of Guardian Angels' and Our Lady of Lourdes RCPS, our vision is to provide our children with the knowledge and skills they need to become brilliant Computing experts. We offer a Computing education where computer science is at the heart of our curriculum. Computing enables all learners to use their creativity and computational thinking to understand and change the world. We acknowledge that technology is ever evolving and will play a pivotal part in our students' lives as they continue to be active participants in a digital world. Our vision is for all our children to become digitally literate, to be ready to live and work in a world and to do this as responsible, digital citizens.

Aims and outcomes

By the end of Year 6, children should:

- Know how to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- Be able to 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
- Know how to 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 of Computing

Include how it is taught in:

EYFS- Computing is taught as focused lessons to preparing the children for their Computing learning journey throughout Guardian Angels'. Continuous provision opportunities are used to enhance teaching and for the children to apply their learning with independence.

Mini mash- digital literacy

Years 1-6 - A focus Computing lesson is taught for one hour within a two-week timetable, every term. Links are made throughout the year, during the teaching of other subjects across the curriculum. Word processing opportunities will be created outside of Computing lessons to ensure pupils are competent and confident in this skill. Purple Mash is the primary resource used when delivering the objectives highlighted in the KS1 Computing National Curriculum. Digital, pictorial and practical outcomes are produced. Photographs of group tasks and individual work can be found on the School Website.

Class Teachers plan opportunities and deliver additional lessons and opportunities to apply key computing skills to further immerse children in the subject and gain a deeper

understanding of what they are learning. Themed days include Safer Internet Day and No Pens Day.

Computing Curriculum overview

	Learning Journey 1	Learning Journey 2	Learning Journey 3
Nursery	- Mouse and Trackpad Skills Hold a computer mouse with finger on the correct buttons. Use a mouse to make the cursor move around the computer screen. Click the correct mouse button to play games on the computer. - Drawing Skills Select colours when painting on the computer. Draw pictures on the computer to go with my work. Use a computer to draw with different widths of pens. Try the different tools that I can draw with on the computer. - Robots Talk about where I am moving a toy vehicle whilst I am moving it. Describe the route taken by a toy vehicle. Follow directions to make a route for a toy vehicle. Plan a route for a toy vehicle.	- Sounds Make music using a computer. - Photography Talk about what photos show. Take photos using a digital device. - Technology Around Us Talk about what technology is used at home.	- Hardware Understand why having clean hands is important when using shared devices. Understand why it is not sensible to eat and drink whilst using a technological device. Understand why I need to take care with electronic devices and their plugs and wires. - Safety and Privacy Explain how my work on the computer belongs to me and other people's work belongs to them. Explain what it means for something to be private. Talk about how my body feels when I am not comfortable with something. - Quizzes Understand what a quiz is. Complete a multiple-choice quiz. Complete a sequencing quiz.
	Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World		
Reception	- Mouse and Trackpad Skills Use a mouse accurately to click and drag objects on the screen. Use the mouse roller to scroll up and down a page. Use a laptop touchpad - Keyboard Skills Find all the letters of the alphabet on a keyboard. Put spaces between words in my typed work. Correct typed work without re-doing the work entirely using the delete keys. Type capital letters and lower case and know how to change between these. Type numbers using a keyboard. Move to the next line down when typing. Use the arrow keys to move around the screen. Use the different inputs of a computer keyboard. - Drawing Skills Use the undo button correctly. Use the erase button. Use a touchscreen device purposefully. Draw on a computer using a mouse. - Robots Follow my own plan for where the toy vehicle should move. Make a floor robot move. Control the forwards, backwards and rotation of a floor robot one step at a time.	- Sounds Add sound effects to my work. Use a device to record myself speaking and play back the sounds. - Photography Use the webcam in Mini Mash. Open photos in Purple Mash. Open photos that I have taken in Purple Mash. - Technology Around Us Talk about what technology is used outdoors. Talk about what technology is used in the world around me.	- Hardware Take appropriate actions when I need to carry a device to a different location. Use devices with care. Identify the technology used around me. Identify the parts of a computer and what they are for. - Safety and Privacy Know who can help me when I am feeling worried. Show that I understand how to be kind to others. Choose activities in my free time that help me to be healthy. - Quizzes Type answers to quiz questions. Complete a cloze quiz. Complete a matching quiz. Complete a sorting and sequencing quiz. Complete quizzes on the computer. Play games that ask me questions

	Program a 3-step route for a floor turtle.		
	Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World		
Year 1	- Creative Computing Developing mouse skills and ICT skills using the creative 2DIY tools in Purple Mash. - Data Explorers Creating Grouping and sorting objects. Relating this to organising and interpreting data. Using pictorial data on Purple Mash. - Following Instructions Understanding simple algorithms through unplugged activities before moving to sequencing activities on digital devices.	- Animated Stories Creating and combining digital art and text to produce digital books using the 2Create a Story tool. - Coding Introducing block coding using 2Code.	- Technology Around Us Defining and understanding what technology is. Relating this to school, home, outside and to its use in the wider world. - Making Beats Introducing the concept of digital music.
	Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World		
Year 2	- Route Explorers Coding using 2Go. Writing simple instructions to move a screen turtle along routes. - The Internet Understanding what the internet is. - Creating Pictures Using a digital art tool to create art in different traditional art styles.	- Spreadsheets Introducing spreadsheets and the way they organise data using the 2Calculate tool. - Questioning Investigating data, how it is collected and how it can be presented.	- Coding Developing coding skills using 2Code. - Presenting Ideas Creating mind maps using 2Connect to organise and present ideas. - Making Music Composing digital melodies using 2Sequence.
	Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World		
Year 3	- Email Communicating electronically using 2Email. Considering safety aspects of email communication. - Route Planners Using 2Go to create routes for screen turtles. Coding using angles of turn and repetition. - Branching Databases Creating branching databases (binary tree databases) using 2Question.	- Spreadsheets Working with data using spreadsheets in the 2Calculate tool. - Coding Developing coding skills using 2Code.	- Presenting Ideas Using industry standard software to create presentations. - Touch Typing Developing touch typing skills using 2Type. - micro:bit Coding using a micro:bit as an external device.

	Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World		
Year 4	- Unpacking Hardware and Software Understanding technology and computer systems in relation to their hardware and software. - Animation Creating digital animations using the 2Animate tool. - Logo Learning the text-based Logo coding language to create patterns and shapes. Coding sequences, repetition, and procedures	- Sound Stories Adding narrative and sound effects to create audio books using 2Cast. - Effective Searching Exploring how to effectively search the internet. Exploring safety aspects of online information. - Coding Developing coding skills using 2Code.	- Making Music Using the Busy Beats tool to explore and compose music digitally. - Introduction to AI Understanding what artificial intelligence is, how it can help and the ethics around its use. - micro:bit Coding using a micro:bit as an external device.
	Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World		
Year 5	- Quizzing Making effective quizzes using 2Quiz. Exploring types of questioning and effective presentation of a quiz. - Databases Using table-based databases for collecting, presenting, searching and analysing data. - Game Creator Designing and making a 3D maze adventure game using 2DIY3D.	- Spreadsheets Working with data using spreadsheets in the 2Calculate tool. - Coding Developing coding skills using 2Code. - Word Processing Using industry standard software to create documents.	- Concept Maps Using and creating concept maps using 2Connect. - Coding External Device Using the Purple Chip app on a tablet or phone device alongside Purple Mash. - micro:bit Coding using a micro:bit as an external device
	Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World		
Year 6	- Graphing Understanding the benefits of creating common graph types digitally. Using appropriate features to present data in the best possible way. - Blogging Understanding how blogs and their features can effectively engage an audience. - Data Detectives Using the Data Detectives tool to work with	- Coding Developing coding skills using 2Code. - Introduction to Python Introducing text-based Python coding using the Python in Pieces platform. Python in Pieces translates between block-code and Python. - Spreadsheets Using industry standard software to work with spreadsheets.	- 3D Modelling Exploring computer aided design in 3D using the 2Design and Make tool. - Binary Understanding binary as a number system and its purpose and application in computing. - micro:bit Coding using a micro:bit as an external device

	large datasets to analyse complex data and answer questions. - Networks - Learning what networks do and how they connect devices. Considering safety aspects of networks and collaboration.		
	Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World		

Cross-curricular links

Computing shares links with the following subjects:

- Maths: analysing numerical data in areas such as programming, sequencing and coding as well as understanding chronological terminology
- Science
- Design and Technology
- Spiritual, moral, social and cultural (SMSC): encourages empathy towards the world we live in and respect for looking after it.

*As digital citizens, our children, especially our pupils with SEND, use a range of alternative methods of recording through regular access to a range of technology including iPads and laptops.

Research and presentation skills are also evident in numerous areas of our Own Grown Curriculum

Assessment

At Guardian Angels' and Our Lady of Lourdes, assessment to enable staff to understand what children have learnt before, what they need to learn now and what they will learn next.

Formative assessment

Formative assessment is used to inform and shape classroom practice on a daily basis, as well as technology enhanced learning to enable pupils to understand and evaluate progress in real time. Marking in the moment opportunities allows pupils to receive instant feedback on their work. Peer-assessment, is built-in to encourage evaluation of strengths and areas for development.

Summative assessment

Summative assessment is completed termly, based on the Computing knowledge and skills that the medium-term plan requires as a key focus.

At the end of each school year, children will be assessed within one of the following bands:

- Pre-Key Stage (PKS)
- Working Towards the curriculum (WT)
- Working at Expected (EXP)

- Working at Greater depth (GDS)

Marking

Children receive regular marking in the moment and are given verbal feedback. Digital marking follows the school's marking policy.

Recording of children's learning

In Computing, pupils will record their learning in the following ways:

- Photographs on the class page
- Videos on the class page
- I-pads/Laptops
- Nursery and Reception- Individual Learning Journals (this may take the form of photographs, pictures, notes or written work, and may be worksheet-based or fully independent. Use of Seesaw / website)
- Application of Computing knowledge and skills evident in pupil's books

Roles and responsibilities

Executive Headteacher

The Executive Headteacher (with the support from the Head of School) will:

- Support the subject leader but also hold them to account for the effectiveness of the subject
- Support staff through the provision of training and resources
- Monitor the planning and delivery of the subject
- Ensure the requirements of the National Curriculum are met
- Ensure this policy is reviewed according to the timescales set out

Subject leader

The subject leaders will:

- Prepare and review subject policy and curriculum plans
- Promote the study of the subject throughout the school
- Monitor the teaching and assessment of the subject
- Attend appropriate CPD
- Stay informed regarding developments in the study and teaching of the subject
- Evaluate resources
- Provide training and CPD to staff on the subject curriculum and its delivery, and keep them informed about subject developments nationally
- Assess the impact of the subject curriculum on pupils' learning and development
- Make presentations to governors on the subject and how it is being taught

Teachers

Class teachers will:

- Teach and assess the subject according to the principles laid out in this policy
- Maintain subject knowledge and appropriate CP
- Report to the subject leader

Inclusion

Teachers set high expectations for all children in Computing. They will use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able children
- Children with low prior attainment
- Children from disadvantaged backgrounds
- Children with special educational needs (SEN)
- Children with English as an additional language (EAL)

Teachers will plan lessons so children with SEN and/or disabilities can study Computing, wherever possible, and ensure that there are no barriers to every pupil achieving. Teachers will adapt and modify their planning and resources to meet the needs of each child. Teachers will also take account of the needs of children whose first language is not English. Lessons will be planned so that teaching opportunities help children to develop their English, and to support them to take part in Computing.

Links to other policies

This subject policy links to the following policies and procedures:

- Curriculum policy
- Assessment policy
- Marking and Feedback policy
- Learning and Living Differences (SEND) policy
- Teaching and Learning policy
- Dyslexia policy
- Anti-bullying policy
- Inclusion policy

Monitoring and review

This policy will be reviewed by staff and governors every two years.