

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

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Last reviewed: February 2024	
Next review: February 2026	

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 equip our children with the knowledge and skills they need to become brilliant scientists. We offer a science curriculum which motivates and actively engages our children, fostering a sense of awe and wonder about natural phenomena and encouraging them to become naturally curious about the world around them. We promote and celebrate the skills of 'Working Scientifically', providing an 'enquiry-based' curriculum where children are encouraged to question and explore the world around them, becoming independent learners in exploring possible answers for their science-based questions. Children are given a variety

of opportunities to do this including outdoor learning in our 'Forest School' and off-site visits.

Our vision is for all our children to be scientists who are inquisitive, independent thinkers and who are prepared for the future in our ever-changing world. We intend to provide an inclusive science curriculum where every child can flourish and reach their full potential, regardless of their ethnic origin, gender, social background or SEND/ Gifted and Talented.

Aims and outcomes

By the end of Year 6, children should:

- Be able to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically.
- They should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates.
- They should also begin to recognise that scientific ideas change and develop over time.
- Be able to select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information.
- Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.
- 'Working and thinking scientifically' is described separately at the beginning of the programme of study, but must always be taught through and clearly related to substantive science content in the programme of study. Throughout the notes and guidance, examples show how scientific methods and skills might be linked to specific elements of the content.
- Be able to read, spell and pronounce scientific vocabulary correctly.

Teaching and learning of Science

Include how it is taught in:

EYFS- Science is taught as focused lessons within the strand of 'Understanding The World' in EYFS. This is to prepare the children for their science journey throughout The Federation of Guardian Angels and Our Lady of Lourdes. Continuous provision opportunities are used to enhance teaching and for the children to apply their learning

with independence. Teachers use their professional judgement to complete EYFS profile assessments to document what a child knows, understands and can do.

Key Stage One- Science is taught every week for two hours. Links are made throughout the year, during the teaching of other subjects across the curriculum. Lessons will include visual elements such as videos and use of pictures and scientific resources to support children's learning. Written and pictorial outcomes are produced. Photographs of group tasks and individual work can be found on the School Website. Pupils will complete investigations supported by their classroom teacher.

Key Stage Two- Science lesson is taught every week for two hours. Links are made throughout the year, during the teaching of other subjects across the curriculum. Lessons will include visual elements such as videos and use of pictures and scientific resources to support children's learning. Written and pictorial outcomes are produced. Children develop their ability to write up fair test investigations as well as develop a sense of enquiry which encourages children to question and make suggestions about why things happen and the world around them. Photographs of group tasks and individual work can be found on the School Website.

Class Teachers plan trips and invite visitors into school to enable children to further immerse themselves in the subject and gain a deeper understanding of what they are learning. We also have regular access to forest school and our local allotment to explore and witness Science in the environment around us.

Science Curriculum overview

	Learning Journey 1	Learning Journey 2	Learning Journey 3
Nursery	Humans Seasonal Changes	Solids, Liquids and Gases Animals Seasonal Changes	Plants Seasonal Changes
Reception	Humans Seasonal Changes	Solids, Liquids and Gases Animals Seasonal Changes	Plants Seasonal Changes
Year 1	Animals Including Humans Seasonal Changes	Everyday Materials Seasonal Changes	Plants Seasonal Changes

Year 2	Living Things and Their Habitats Plants	Everyday Materials Animals Including Humans	Plants Living Things and Their Habitats
Year 3	Animals Including Humans	Rocks Forces and Magnets	Light Plants
Year 4	Animals Including Humans	Sound States of Matter	Living Things and Their Habitats Electricity
Year 5	Earth and Space Forces	Properties and Changes of Materials	Living Things and Their Habitats Animals Including Humans
Year 6	Animals Including Humans Evolution and Inheritance	Electricity	Living Things and Their Habitats Light

Cross-curricular links

Science shares links with the following subjects:

- English: development of literacy skills through reading, writing and oracy
- Maths: analysing numerical data and understanding chronological terminology
- Computing: use of the internet for research, data handling and presentation of written work
- Spiritual, moral, social and cultural (SMSC): encourages empathy towards the world we live in and respect for looking after it.

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 science assessment is ongoing and will be used to inform teachers in relation to their planning, lesson activities and adaptations.

Summative assessment

Summative assessment is completed termly, based on the Scientific 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 feedback and marking follows the school's marking policy.

Recording of children's learning

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

- Science books
- Photographs on the class page
- Videos on the class page
- I-pads/Laptops
- Reception-Individual Learning Journey (this may take the form of photographs, pictures, notes or written work, and may be worksheet-based or fully independent. Use of Seesaw / website)

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
- Report to the subject leader

- Maintain subject knowledge and appropriate CP

Inclusion

Teachers set high expectations for all children in science. 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 Science, 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 Science.

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

Monitoring and review

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