

God wants me to be the best I can be



St Joseph's Roman Catholic Primary School Science Policy

Jesus is the centre of our lives

Mission statement

Through His teaching we aim to value ourselves and each other as unique and precious individuals created by God;

We encourage and develop love and respect for each other and for our world;

We strive to promote and deepen our Catholic faith through prayer, work and play;

We aim to foster a loving, caring environment in which each child can freely learn and develop to their full potential.

Gospel Values underpinning our curriculum

Love, friendship, respect, truth, hope and forgiveness.

1. INTRODUCTION

This policy document reflects the aims, values and philosophy of the school with regard to Science. The policy sets out the framework within which the whole staff operates and should be read in conjunction with all other policy documents. The Governing Body, Headteacher and Senior Leadership Team, Science subject leader and individual teachers have particular roles and responsibilities in relation to the implementation of this policy.

2. INTENT

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

At St Joseph's, we aim to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
- become equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Moreover, we also aim to:

- Develop in children a love of science.
- Provide a wealth of opportunities to ensure that children are aware of science in the real world and how science impacts on other curriculum area.

3. EQUAL OPPORTUNITIES

At St. Joseph's, we incorporate science into a wide range of cross-curricular subjects and seek to take advantage of multicultural aspects of science wherever possible. All teachers aim to give every pupil the opportunity to experience success in learning and to achieve as high a standard as possible. When planning, teachers set high expectations and provide opportunities for all pupils to achieve, including boys and girls, pupils with special educational needs, pupils with disabilities, pupils from all social and cultural backgrounds, pupils in receipt of the Pupil Premium Grant, and pupils of from different ethnic backgrounds. All teachers aim to challenge the more able to deepen their conceptual understanding, whilst at the same time ensuring that SEND and lower ability children are able to keep pace with their peers through effective differentiated teaching and intervention and by deploying a range of effective teaching strategies to cater for different learning styles.

Children in Robins class follow the PSTT STRATA Science curriculum to support their learning.

In the early phase the teaching will be linked to the outdoors and we will use that to support the children's love and interest. As a result of this, children will develop their scientific enquiry.

4. KNOWLEDGE, SKILLS AND UNDERSTANDING

Children in EYFS work towards the Early Learning Goals. At Key Stage 1 and Key Stage 2, teachers deliver the National Curriculum (2014) for science in accordance with government policy. Further details of our curriculum skills can be found on our school website and on the DfE website.

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

5. SPOKEN LANGUAGE

The national curriculum for science reflects the importance of vocabulary and spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their scientific vocabulary and articulating scientific concepts clearly and precisely. They must be assisted in making their thinking clear, both to themselves and others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

6. WORKING SCIENTIFICALLY

'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. The notes and guidance give examples of how 'working scientifically' might be embedded within the content of biology, chemistry and physics, focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions. These types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data.

Key skills and all programmes of study will be delivered through topics covered in the Plan Assessment Science scheme.

7. SCHEME OF WORK

Teachers base their planning on the National Curriculum for Science supported by the Plan Assessment knowledge matrixes; below is a chart of the coverage within the classes.

A set of key skills for each year group is used to ensure all children have the necessary skills to access Science lessons. Achievement of these objectives are recorded using the Science KLIPs and then end of topic judgements are recorded on Sonar an online tracking tool.

Year	Cycle	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y1/2	A	Plants (Y2)	Habitats (Y2)	Animals including Humans (Y2)		Materials- uses of everyday materials (Y2)	
Y3/4		Habitats (Y4)	Animals including humans (Y4)	States of matter (Y4)	Sound (Y4)	Electricity (Y4)	
Y5/6		Living things and their habitats (Y6)	Animals including humans (Y6)	Light (Y6)	Electricity(Y6)	Evolution and Inheritance (Y6)	
Y1/2	B	Plants (Y1)	Seasonal change (Y1)	Animals including humans (Y1)		Materials uses of everyday materials (Y1)	
Y3/4		Plants (Y3)	Animals including humans (Y3)	Rocks (Y3)	Light (Y3)	Light (Y3)	Forces and magnets (Y3)
Y5/6		Living Things and their habitats (Y5)	Animals including humans (Y5)	Properties and changes of materials (Y5)		Earth and Space (Y5)	Forces (Y5)

8. PRINCIPLES OF TEACHING AND LEARNING IN SCIENCE

Science is a core subject in the National Curriculum. It is based on key areas of learning:

- Exploring / Observing
- Grouping and Classifying
- Questioning
- Research
- Modelling
- Collaborating
- Planning and testing
- Using equipment and measures
- Communicating
- Investigating
- Explaining results

To support these key areas teachers use the Thinking, Doing, Talking Science approach.

Each class teacher is responsible for the science teaching and learning in his or her class. They should organise a weekly lesson of 60 minutes' length. Science projects and science week are used encouraged to engage children in Science. Teachers of Reception children base their teaching and learning on Development Matters.

9. CURRICULUM PROGRESSION

Key Stage 1

The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos.

'Working scientifically' is described separately in the programme of study, but must **always** be taught through and clearly related to the teaching of 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.

Pupils should read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1

Lower Key Stage 2

The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

'Working 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.

Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge.

Upper Key Stage 2

The principal focus of science teaching in upper key stage 2 is to enable pupils 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. At upper key stage 2, 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. They should 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.

10. PUPILS' RECORD OF LEARNING

Children are encouraged to work neatly when recording in books. The learning objective and date (in written format) should be written clearly at the start of each lesson. Books will demonstrate a variety of types of recording including drawings, graphs, jottings, investigations, diagrams and explanations of results.

11. MARKING AND FEEDBACK

Please refer to the school's Marking and Feedback Policy.

12. ASSESSMENT AND RECORDING OF PROGRESS

The children will be assessed at the end of each topic. Science is assessed against the Lancashire KLIPs. Plan assessment knowledge matrices also support teachers in making valid assessments. In years 2 and 6 the children will be assessed against the interim assessment statements. Teachers also use the TAPS assessments in each topic to assess the children in that topic. At the end of each topic the teacher will make a summative judgement about the attainment of each child recording whether they have yet to meet, have met or have exceeded the topic objectives. This will be recorded on Juniper and will be monitored by the Science Coordinator. If children are not meeting expectations extra support will be put in place to support this.

13. REPORTING TO PARENTS

Parents are always welcomed into school at a mutually convenient time to discuss their child's learning in Science. Parents are given the opportunity to look at Science books and discuss their child's progress during Parents' Evenings in the Autumn and Spring Term. Reports and optional comments sheets are sent out to parents during the Summer Term.

14. MONITORING AND EVALUATION

Monitoring and evaluation is seen as key in improving standards in science teaching and learning. As such, it is given a high priority at all times. Termly book and planning scrutinies, learning walks, pupil conferencing and lesson observations by the Science subject leader enable standards to be monitored and evaluated. Opportunities for teachers to review policy, practice and materials are given on a regular basis during staff meetings.

15. RESOURCES

It is the responsibility of the class teacher to ensure each Science lesson is appropriately resourced; any requests for further resources should be made to the Science subject leader. All classrooms should have a Science display; this should include good examples of work and key vocabulary. All children are encouraged to use practical equipment to develop deep conceptual understanding at every possible opportunity. Learning is also supported through visual resources.

16. THE ROLE OF THE SCIENCE SUBJECT LEADER

The role of the science subject leader is to:

- Take the lead on policy development and planning
- Support colleagues in their planning and implementation of the National Curriculum and in assessment / record keeping activities
- Take the lead on science action planning in line with school improvement/development
- Take responsibility for monitoring and evaluation in science, including planning/book scrutinies, discussions with pupils, learning walks and observations, analysing data/standards and moderation.
 - Take responsibility for the purchase and organisation of science resources and analyse the value for money of these resources
- Keep up to date with developments in science education and disseminate information to colleagues as appropriate

17. REVIEW OF POLICY

Policy Reviewed by Mrs Sanderson-Science Lead September 2025

This policy will be reviewed by governors in the September 2026